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Canada Commercial Intelligence Service

Trading with Switzerland

BY

W. McL. CLARKE

Canadian Government Trade Commissioner
to Italy



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DEPARTMENT OF TRADE AND COMMERCE
OTTAWA, CANADA

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COMMERCIAL INTELLIGENCE SERVICE
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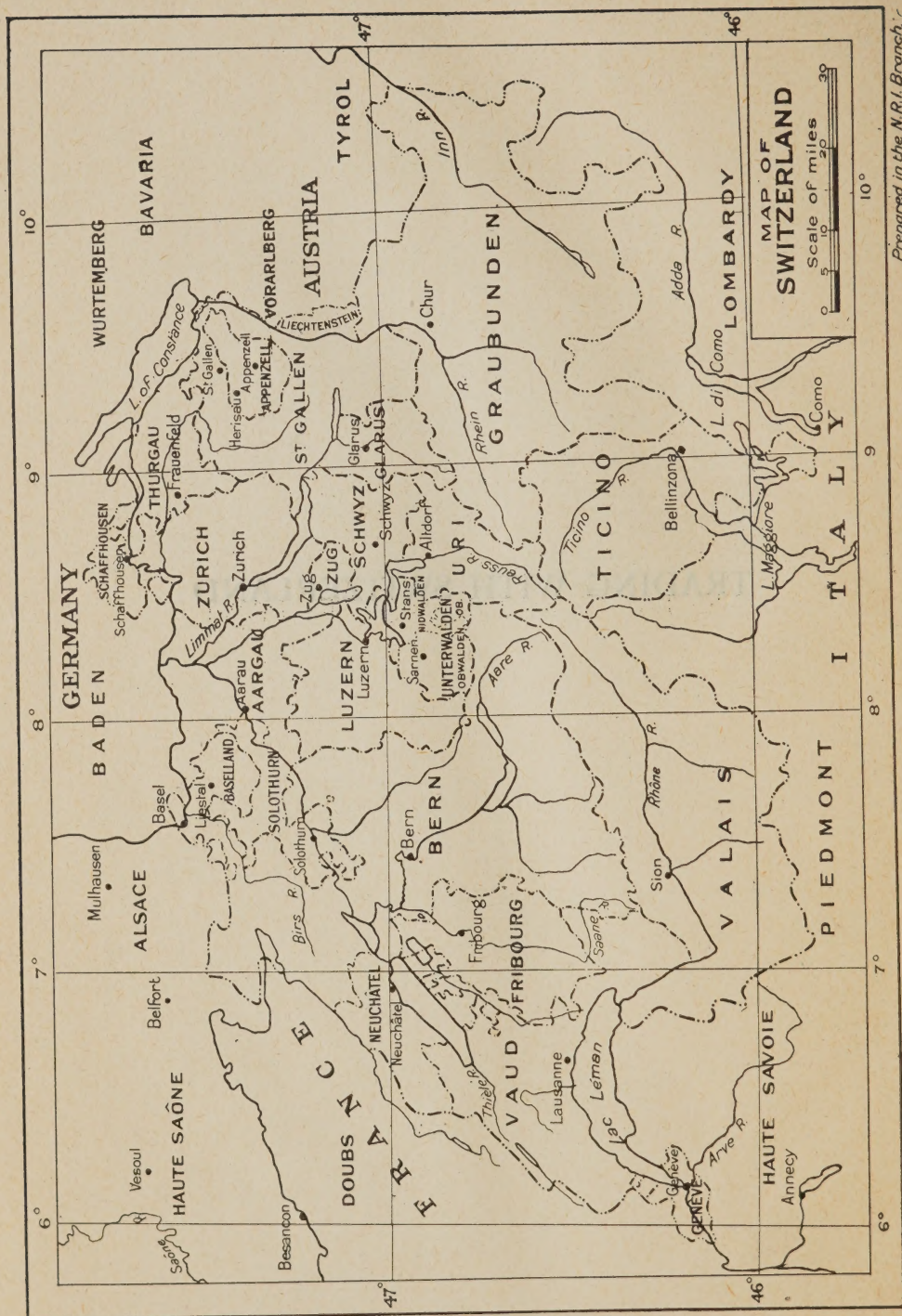
DEPARTMENT OF TRADE AND COMMERCE
COMMERCIAL INTELLIGENCE SERVICE
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TRADING WITH SWITZERLAND



Prepared in the N.R.I. Branch,
Department of the Interior, Canada

PART I

Introduction: Ways and Means of Developing Swiss-Canadian Trade

SWITZERLAND'S CLAIM FOR DISTINCTION

Switzerland is perhaps best known to us as a country of giant mountains and picturesque lakes and as the seat of the Red Cross and the League of Nations. But this little country lying in the heart of Europe has quite another claim to pre-eminence, for is it not the land of the Swiss which for seven hundred years has shown the world how its inhabitants of different race, of different language, and of different customs, can live together under the same national roof as one homogeneous people, each contributing to the development of the welded whole, and each receiving from the common nationality that distinctiveness which makes Switzerland what it is. Switzerland has been teaching men for centuries that it is not extent of territory, nor lust of conquest, nor greed for mammon which make for national happiness, but rather freedom, justice, democracy and the goodwill of those governed. As the home and exemplar of liberty, Switzerland assumes a commanding position among the world states of to-day.

THE SIMPLICITY OF THE SWISS

As the report which follows deals with matters appertaining to trade, it is not apposite here to relate the origins and historical development of the Swiss people. What is important, however, in connection with the subject is to know something of the Swiss as they are to-day.

In the first place, the writer was impressed with the simplicity of the people. There is of course no royal court at Berne, the capital, nor is there anywhere a semblance of that kind of life. The Federal Palace is the meeting-place of Parliament and not a social rendezvous. State functions are few and are conducted in no atmosphere of pompous lightness. In fact, simplicity and dignity characterize both dress and entertainment in official levees. "Like King like people," and so down through all the social life of the country the cue is taken from those above, or conversely, if you will.

If there is no royal palace there is also no military party, nor is there vaunted an aristocracy of blood. Not that the Swiss cannot boast of their genealogy, but that they don't. Their heraldic arms they hold in esteem not for what they are to-day, but for what they represent. Moreover, titles are not given and rarely assumed in Switzerland.

Still less than ancestry is wealth intrinsically regarded. True, many are rich and large fortunes have latterly been made, but wealth has not corrupted nor does it control the State. Men are regarded not for what they have but for what they are. There may be one exception. Learning is the criterion by which men are most often judged in Switzerland, and education is the *sine qua non* to almost any achievement or distinction. In no other country perhaps does the school and the university play so important a part as in Switzerland, and national illiteracy is negligible. A religious people besides, who for the most part take their religion seriously, a family people who mingle little with the passing tourist and foreign element permanently in their midst; friendly to all but intimate with few, they enjoy themselves among themselves, and have no castes, but one which includes them all. As has been well said, "The president is some one, the colonel is some one, the professor is some one, the lawyer is some one, the artist is some one, but fundamentally only the people count."

LOYALTY TO ESTABLISHED INSTITUTIONS

Among this type of citizenship revolutionary thinking is not likely permanently to disturb the existing order. Not that the new ideas are swept ruthlessly aside, and that an ultra-conservativeness prevails. Trade unionism, for example, has gone strides ahead these last few years, and the workman now goes of an evening to his union meeting, and enjoys the latest cartoons which show up the relation of capital and labour. Advanced politics, too, are discussed and the old political theories dissected, while the past is at times not given the reverence of former years. But standing foursquare against any social reversal are the middle classes, the descendants of the mediæval guilds, within whose old palaces at Berne, Zurich, and Basle the sanest thinking and most practical discussions take place. Conflicting opinions are bound to arise in a modern state, but loyalty to the established institutions is too deeply ingrained in Switzerland to allow any undermining of the political and social status.

THE MODERNITY OF THE SWISS

If the Swiss, however, are unostentatious, if social caste is non-existent, and if conservatism rather than radicalism is the note of public opinion, they are at the same time a most modern people. Take their cities. Zurich, for example, is one of the most up-to-date towns in Europe. Large well-fitted shops, offering the best of the world's emporiums, beautiful parks, wide tree-shaded and paved streets, imposing public buildings, a large university, one of the first opera-houses of Europe, fine hotels, electric advertising, de luxe restaurants, tramways, funiculars, taxis, sporting and social clubs—all these go to make up a modern city. And above all, this city, like others in Switzerland, is scrupulously clean. One sometimes feels that it is hardly becoming to flick off ashes on a Zurich street. Paper and debris never accumulate. Beggars never turn up. Order and courtesy are everywhere in evidence, and service of the most satisfactory character is on all sides assured the visitor.

The modernity of the Swiss is also seen in their telephone, telegraph, and railway system. The telegraph and telephone are constantly in use, and hitches rarely occur. Despatch and accuracy characterize both of these services. With regard to the railways, it may be said without fear of contradiction that the Swiss third-class carriage is as clean as the first-class in some other nearby continental countries. Travelling in Switzerland is never fatiguing and trains run punctually to the minute.

HOUSING AND DRESS

Then the Swiss houses are modern. The poorest people have more conveniences as illumination, bathrooms, sanitary arrangements, heating installations and household equipment than do the middle and some of the wealthier classes in a country like Italy. Even the Swiss peasants in their picturesque wooden chalets have many of the comforts of a Canadian farmer. The city houses are generally of stone, and there are more self-contained dwellings, more two- or three-storied flats, and more garden space than there are large apartment buildings abutting on the street.

As regards dress, Swiss women in the cities do not on the whole present the same *chic* appearance as those of Paris or Milan. The costumes are generally more modest, and silk is not used to the same extent. The shoes are not so fancy, nor so extreme as seen in other continental centres. Men dress well but not extravagantly, and the darker-coloured suitings seem to be preferred.

THE AMUSEMENTS OF THE SWISS

How do these people amuse themselves? The pastime which comes foremost in the daily life of the Swiss is undoubtedly walking and Alpine mountaineering. From members of parliament on down to the peasant folk, this diversion is the most popular. Equipped with hobnailed boots, the alpenstock and the rucksack, off they go on a

week-end or longer excursion, and happiest are those who come back with the edelweiss, the national flower, which grows far up on the mountain ascent. The younger Swiss have their summer aquatic sports, and regattas on lakes Zurich and Lucerne are held periodically, to which thousands of people go and in which hundreds participate. In the winter time skiing and the kindred sports afford a large amount of pleasure to the many who take part; and it is wrong to think that St. Moritz with its foreign clientèle from European capitals has the monopoly of the Swiss winter sports. Football and tennis are also played in season, while Zurich, Lucerne, Geneva, and other cities have their summer carnivals and horse-jumping contests. Most of the men by military training handle the rifle well. The Swiss are on the whole an outdoor people, fond of exercise and sport, which predilection explains to no small extent the healthiness and sturdiness of the race.

But if they delight in the open air and in the exhilaration of out-of-door activity, the urban Swiss are also fond of their opera, of their cafes and beer shops, of their casinos and exhibitions. Wagner or Verdi draws a crowded theatre; the orchestral music of the restaurants is always an attraction; the casino, though enjoyed by the tourist, is also largely patronized by the Swiss, while the exhibitions and national museums attract on a Sunday or holiday no small number of native visitors. The Swiss, too, like to travel, and apart from its educational advantages, of which so many avail themselves, they always look forward expectantly (and with a great deal of pleasure) to a temporary migration either within or without the country.

In short, a serious-minded and hard-working people, the Swiss, unconsciously perhaps, attach much importance to amusement and exercise.

Enough has been written to give some idea, most inadequate though it must be, of the kind of people with whom this report urges Canadians to trade.

THE WRITER'S MISSION AND REPORT

The writer recently spent about eight months in Switzerland studying at first hand local conditions, meeting members of the leading business, banking, and industrial community, and discussing with them and with the Federal authorities the opportunities for Swiss-Canadian trade exchanges and other questions relative thereto. Berne, Basle, Zurich, Wintertur, St. Gall, Lucerne, Lausanne, Geneva, Newchatel, and Lugano were each visited, as well as half a dozen smaller centres of commercial interest. The report which follows is the result of this official mission, and has been based on the writer's findings and on a pretty thorough study of several Swiss economic works. It may be stated at the outset that there are many open doors for Canadian products, and that Switzerland has several commodities which we can advantageously buy in that country. An additional consideration is that in introducing our goods into Switzerland we are not only selling them to the Swiss, but in some cases at least will be showing them to other countries whose citizens come either to Switzerland on business or for holiday purposes. In short, Switzerland by its central position and on account of the many attractions it holds out to the tourist, is *per se* an advertising market for what Canada has to sell. The depreciated exchanges of other countries may make it temporarily more profitable for Switzerland in some instances to purchase elsewhere what she can well buy from Canada, but these conditions of trade are likely to persist. In the meanwhile it were best to be alive to present-day openings and to take care of the morrow by a timely preparation with a view to the exploiting of the other and equally as important Swiss markets.

The writer before closing this introduction wishes (1) to acknowledge especially the assistance so courteously given him by the Federal authorities, by the Commercial Secretary of the British Legation at Berne, by the various British consuls, and by the British Chamber of Commerce for Switzerland; and (2) to express the hope that this report will awaken a greater interest in the development of reciprocal trade between Switzerland and Canada.

WAYS AND MEANS OF DEVELOPING SWISS-CANADIAN TRADE

In considering the ways and means by which Canadian trade can best be developed with Switzerland, the writer would make the following observations:—

(1) The need of informing ourselves about Switzerland. First comes the national unity of the Swiss. It is too often believed abroad—and Canada is probably no exception—that Switzerland is to some appreciable extent German in national characteristics, and that trading with Switzerland is pretty much the same as trading with Germany. To take a case in point. The writer has heard it stated, not only once at home, that Switzerland exports for example mostly German chemicals, but in travelling in Switzerland and in visiting the large chemical works of Basle one comes to realize that Switzerland has her own varied chemicals and aniline colours to export and that foreign importers need not think themselves so dependent on German sources of supply. It is quite an erroneous conception of the Swiss people to regard them as German. True, there exists in Switzerland in varying degrees identities of language as well as racial and cultural affinities with Germany, but it is equally true that there is a large French as well as a smaller Italian Switzerland. In fact these ethnological adjectives as applied to Switzerland are often misleading. There is not in reality three different Switzerland—but only one “patria,” and that is distinctly Swiss. The writer, for example, asked a store-keeper in Lugano (Italian Switzerland) his opinion of the Italians, and among other things the merchant replied: “They are not of us.” The same reply in other words came to me at Lausanne about the French, and at St. Gall about the Germans. The Swiss are an intensely patriotic people—as school children Canadians surely learned this—and no greater injustice can be done the Swiss than to dub them German or Italian or French. The Canadian exporter should keep this fact in mind and remember he is catering to a national market whether he does business in Geneva, in Zurich, or Lugano, and not trading with a hybrid and heterogeneous people.

THE NEED OF BEING INFORMED

In the second place, a Canadian firm before starting business with Switzerland must be informed primarily of the economic status of the market—i.e. (a) whether a demand exists, or whether it has to be created for any given commodity; (b) if a product is imported, whence it is derived; (c) the approximate relation of the output of the particular article at home to the aggregate national consumption; (d) the elasticity of the demand, whether it is of a permanent character and whether it is seasonal; (e) the potentiality of the demand and if it is more than actual; and (f) the methods by which business is most successfully carried on and how best to make a Canadian export proposition appeal to the Swiss. There is further the need of at least skeleton information on the various other economic phases of Switzerland's national life. In short, a study of the market and of the country must be made.

FIRST-HAND INVESTIGATION

Now although this present report has been written with a view to giving the more essential general information required in developing Swiss-Canadian trade, yet further data may often be required, and the office of the Canadian Trade Commissioner in Milan will be glad to answer any specific inquiries which are addressed to it in this connection. But quite apart from this, the writer would recommend that a study of actual import conditions at first hand should be made by Canadians interested in export trade. Almost by instinct, Canadian manufacturers generally know how best to cater to the specific requirements of the home market, as they are working in an environment made familiar to them by years of experience and association. In Switzerland, however, a Canadian manufacturer enters into competition on a distant front, and the home tactics of business expansion will need to be adjusted to suit a

foreign campaign. Once abroad, the Canadian manufacturer will begin to realize that the theories so often propounded by Trade Commissioners are based on observation and not on theorizing. The writer cannot recommend too strongly a study of the Swiss market at first-hand either by one representative for each firm or by one representative of a group of firms.

Travelling in Switzerland incidentally costs approximately the same as in Canada, and if hotels are slightly more expensive, railway tickets are less. At least Zurich, Basle, and Geneva should be visited in investigating any particular Swiss market, while cities like Lausanne, Berne, St. Gall, and Lugano have likewise trade claims on the Canadian exporter. It may also be suggested that the British Chamber of Commerce at Basle and Lausanne will be found most helpful to the Canadian representative, and the opportunity should be taken to make use of its services; other sources of commercial information are mentioned in a later part of this report.

THE NEED OF GIVING INFORMATION

Let it be presumed then that the Canadian firm interested in carrying on trade with Switzerland has, both by study and (preferably) by personal observation, informed itself rather fully of the status and psychology of the Swiss market, and of its demand and supply features. There then remains the equally important task before any trade is consummated, of informing the Swiss importer of Canada and of Canadian products, and of letting him know how we are prepared to trade. Exporting to Switzerland means not only the assimilating of knowledge, but its impartation. Data about Switzerland must be learned, but data about Canada must be disseminated. Hence the need of Canadian propaganda in Switzerland.

ADVERTISING

Now, leaving aside Government propaganda, which is valuable in its own place, there is the individual advertising of Canadian products. Of course this too can best be done by a personal visit. A Canadian representative goes to Switzerland, talks personally to importers, explains his company's production, and how it can be conveyed to Swiss territory and at what price, with the result that the Swiss firm realizes that here is a Canadian company which means business, and here is a firm which has something definite to offer. Results may not be immediate, but in nine cases out of ten the writer believes that that particular Canadian firm is much nearer actually exporting to Switzerland than the ninety-nine other houses whose representatives stayed at home. A personal point of contact will be established, and this feature of all successful business to-day, whether domestic or foreign, needs no crying up here.

To supplement this personal propaganda there are other media which may be advantageously employed. For example, comprehensible catalogues and literature can be distributed to importers of standing and to Swiss commercial organizations; understandable circular letters can be despatched; Canadian trade reviews can be placed in right hands; advertisements can be inserted in local technical reviews; samples can at times be shown; street car and theatre advertising can be employed; and practical demonstrations of such goods as agricultural machinery can be held. As in other countries, Canadian exporters need to billboard their wares in Switzerland, and it is difficult to understand why a firm which spends more than a small amount of money on advertising in Canada is adverse to putting aside at least a small figure for advertising in a foreign market. The intentness of an exporter may often be inferred from his foreign advertising policy. Of course, the results of advertising, like bread cast upon the waters, may only be found after many days.

THE USE OF FRENCH TO BE PREFERRED

But more requires to be done than to make Canadian wares known to the Swiss. Canadians must make themselves intelligible to him. Let it be forgotten for the present time that a large number of Swiss business men speak English. The Swiss

are in fact accomplished linguists, and it is rather occasional to meet an important business man in Switzerland who cannot converse in French, German, Italian, and English. But English is the least known of the four, and this point is not to be overlooked. English is not a Swiss language, and just because of this there is a psychological aspect in the use of French or German, for example, in approaching Swiss houses. It is to be remembered that at first it will probably be the Canadian who will be obliged to open up negotiations with the Swiss, and it is at least a favourable entrée to address him in a language always intelligible. The writer does not wish to over-exaggerate this point, as the fact that English is understood so frequently in Switzerland is of course advantageous to our exporters, but it might be safely predicated that until a Canadian firm learns that English is quite comprehensible by his Swiss addressee, it is preferable to adhere to French. Naturally to Canadians, French would be recommended rather than German.

METRIC WEIGHTS AND MEASURES

If, however, English is sometimes optional, the use of the English weights and measures can hardly thus be termed. A necessary qualification for successful trading with Switzerland is in most cases a quotation according to metric weights and measures. A Swiss always thinks first in his own system, and other modes are to him at best a clumsy way of expression and a sign of indifferent accommodation. With regard to price quotations, these should preferably be in Swiss francs, although the Canadian dollar, which is now being quoted on the Swiss bourse, is beginning to be pretty well understood. The quotations of other competitors like Germany, however, are made in Swiss francs, and such quotations are, generally speaking, the more acceptable.

C.I.F. QUOTATIONS

In the case of Switzerland, which has no seaport of its own, Canadian manufacturers should quote prices c.i.f. European port, generally either Antwerp or Rotterdam or Genoa. There seems little reason why our exporters should continue to quote f.o.b. inland Canadian point or even f.o.b. Montreal and St. John when now there is direct steamship service between these ports and the European centres just named. The least Canadian firms should do is to offer their products at a certain laid-down price in a European port which Switzerland uses, while the most they can do is to make a straight-through quotation to warehouse, Swiss city. If Canadian exporters would co-operate more closely with the important forwarding agencies established in Switzerland, this second alternative should be of practical execution. In this connection it may be mentioned that the Dominion Express Company of Canada has very capable representatives in Switzerland, who operate also in Belgium, Holland, and Italy. If, however, exporters cannot bring themselves to through quotations, they will be well advised to remember that whereas Montreal to most Swiss business men is but a name of a distant city, Antwerp, for example, spells for them almost their front door. Hence it is not hard to understand why it is that c.i.f. prices are destined to be more acceptable than f.o.b. quotations. In our ordinary life it is the shopkeeper who will deliver our purchases to our house who usually gets our business, and the analogy generally holds good in export trade.

TERMS OF PAYMENT

Switzerland is not a long-credit country, as is pointed out in a subsequent part of this report, but the Swiss fail to see why they should transmit money with order, why they should open up irrevocable credit, or why, as a general rule, they should make payment cash against documents. They are accustomed to better terms from other countries, and why expect less from a country like Canada which they understand is seriously interested in export trade? "We get thirty days from other sources, and we are trusted by firms just as important as these Canadian houses

with which we are negotiating." Why then, they argue, do Canadians insist on a hard-and-fast rule of absolutely no credit. The Swiss business man likes to be trusted, and more than that usually *can* be trusted. Generally speaking he is a serious and conscientious individual, and there are fewer sinister business dealings in Switzerland than perhaps in any other continental country. Of course reliable information should be taken about each importer approached, but investigations of a reliable nature should ordinarily preclude disastrous results.

The Swiss banks, Lloyds Bank at Geneva and Zurich, the British Commercial Intelligence Service and the British Chamber of Commerce in Switzerland, and the office of the Canadian Trade Commissioner in Milan are among the sources which may be appealed to for rating information, and there can be little excuse therefore for being ignorant of the commercial status of any Swiss firm with which it is worth while to do business. Of course a certain amount of commercial risk is run in every business venture, domestic or foreign, and in exporting to Switzerland these risks cannot be entirely eliminated.

REPRESENTATION

The writer does not intend to cry down any one system of representation or to write a brief for any other. The important point is that Canadian firms should be represented in Switzerland, and if they wish to do Swiss trade, not try to carry on this inland continental business from London, Paris or Hamburg. Zurich, Basle, Geneva and Lausanne are the chief strategic points for carrying on business and Canadian firms would do well to have representatives there. It is not fair to Swiss-Canadian trade to work it permanently from another country. This system may have been successful at times, but is not likely to produce the best results. Nor can the mail order business be permanently satisfactory. Usually the Swiss commission agent is the best mode of introduction, and if he is rightly chosen and has proper backing from home and is given a little time, he is almost sure to bring exporters business which otherwise they would not obtain. Whether Canadians eventually open up direct agencies, or use merchants and exporting houses at home, or whether they employ exclusive Swiss representatives or commission agents, or whether trade groups combine and send out a common representative, are questions which can only be settled as one system or another best suits the manufacturer's individual interests. One firm may find one system the most effective, and another manufacturer may adhere to some other method. Each has its place in exporting, but provided a manufacturer is not determined to have his money in advance or cash at seaboard, he will generally find the Swiss commission agent a useful intermediary. Of course some big Swiss plants like boot and shoe manufacturers of importance, and large paper mills, will buy direct from the producer provided the business can in this way be arranged.

No matter what policy is adopted, periodical visits of competent buyers from the home firm should be made. This frequent contact of buyer and seller cannot be emphasized too highly. It is important, as has been already pointed out, to study each customer individually and to keep in touch with local conditions, customs and prejudices. When necessary, for demonstration purposes technical experts should be sent out who can make specifications intelligible and who can familiarize the dealer with the given Canadian product.

THE PACKING OF GOODS

The Swiss importer or the ultimate consignee has the right to expect that Canadian merchandise will arrive in good condition. This is the "consummation devoutly to be wished," and unless the goods present themselves, when imported, in the same way as they did when they were placed in the packing case, the packing

has in some way been faulty and the end in view frustrated. Packing, if it has been successful, will ensure, unless *force majeure* has intervened, the safe and satisfactory arrival of goods in an undeteriorated condition.

In exporting from Canada to Switzerland, it is needful to remember that all merchandise consigned thereto has to be transhipped at foreign port; for example, Antwerp, Rotterdam or Genoa, and conveyed from seaboard to Swiss interior. At times this merchandise may have to cross two frontiers and may therefore be side-tracked, shifted to another wagon, or held over, although through-freight cars are generally run from European port to Swiss destination. Yet there is just the possibility of goods being subjected to more handling than if they arrived at Marseilles, for example, and were destined for Paris. If exports go via the Rhine the breaking of bulk must often take place.

A few general observations may be made on the best methods to employ in packing for Switzerland:—

- (1) Swiss buyers' instructions should always be sought and minutely followed.
- (2) Goods should be packed in the strongest possible boxes designed to occupy the smallest possible space. Cases generally should not exceed 250 pounds in weight.
- (3) Packing cases should be packed full as empty space is non-economical and makes for weakness inasmuch as it is a constant cause of damage from breakage.
- (4) Some form of waterproof protection is generally advisable, i.e., either lining the case with tar-coated paper or else hermetically sealing the case with tin or other metal.
- (5) Cases should be hooped with iron bands not only to increase strength but to afford additional protection against pilferage.
- (6) The interior packing should guard against any inconvenience to consignee.
- (7) Each kind of goods should be packed by itself in order to avoid import duty complications.
- (8) Marking (stencilling preferred on at least two sides) should be from 2 to 3 inches in height and should indicate Swiss destination via port of transshipment, the distinguishing mark of the consignee, and at least the gross weight, on which Swiss custom duties are based.
- (9) Every care should be taken in Canada to prevent confusion when invoices and contents are checked off. Invoices in French will be much more frequently understood than those in English.

UP-TO-SAMPLE AND UNBREAKABLE CONTRACTS

Canadian exporters should establish for themselves in Switzerland a reputation of being scrupulously conscientious in maintaining the quality of their goods and in shipping according and up to sample. Moreover, the inadvisability of breaking contracts once made, need hardly be pointed out. Nothing can displease the Swiss customer more, and make him impervious to further solicitations for business. All engagements should be punctiliously kept, and a contract once duly entered into should be filled at any cost by the Canadian manufacturer.

When in Switzerland the writer's attention was called to contracts recently broken by Canadians with Swiss exporters of silk goods. What was intimated was that a few Canadian firms with a falling silk market broke away from their commitments and went beyond the bounds of generally accepted commercial practice. In injuring themselves, they have indirectly hurt other Canadian business. Cancellation of contracts in most commercial cases—and these facts need to be stated plainly—without the mutual consent of the contracting parties, is at least a breach of business etiquette. English business dealings are generally proverbial of the highest degree of business integrity abroad; loss in fact is often preferred to a bad name, and it is this criterion of probity which Canadians need to establish in both our import and export trade, not with Switzerland alone but throughout all foreign markets.

RECAPITULATION

In considering the ways and means of best carrying on Canadian trade with Switzerland, there has been pointed out:—

- (1) The need of informing ourselves about the Swiss and about the Swiss market.
- (2) The need of first-hand investigation.
- (3) The need of giving information.
- (4) The need of advertising.
- (5) The desirability of the use of the French language, the Swiss franc, and the metric weights and measures.
- (6) The advisability of c.i.f. prices European port.
- (7) The need of breaking away from ultra-conservative trading terms.
- (8) The necessity of adequate representation.
- (9) The indispensability of good packing.
- (10) The imperative of shipping according and up to sample.
- (11) The obligation involved in a contract once made.

PART II

Facts About Switzerland

THE SIZE OF SWITZERLAND

Few world powers so important commercially and industrially are actually smaller than the Helvetian Confederation. France is fourteen times, Germany twelve times, Great Britain over seven times, and Italy eight times as large as Switzerland, whose total area is 15,976 square miles. Our own provinces of Nova Scotia and New Brunswick are respectively 5,452 and 12,009 square miles more extensive. About seven times the size of Prince Edward Island, Switzerland is but $\frac{1}{234}$ part in area of the Dominion of Canada.

ITS SITUATION AND GEOGRAPHICAL DIVISIONS

In rough outline Switzerland forms a hexagonal figure, touching Germany on the north and northwest, Austria on the east, Italy on the southeast and south, and France on the southwest and west. Surrounded by these neighbours, the country is therefore situated in the heart of Europe and is the inland island of the continent without direct access to the sea. From the ports of the North Sea and the English Channel, Switzerland's industrial cities are at the least some 350 miles distant, and although the Adriatic and the Mediterranean are in reality nearer, yet the nature of the intervening territory presents considerable difficulties to rapid transportation.

Geographically the country differentiates itself into three parts: (1) the Alpine region sloping northeast and covering with its ramifications about one-half of the Swiss territory; (2) the region of the Jura sloping northwest and forming one-sixth of the country; and (3) the central plain comprising the other third and lying in triangularly between the two mountainous districts, the base of the triangle running southwest. Of these three natural divisions the last, with its belt of plateau land between fifteen to twenty miles wide from Lake Geneva to Lake Constance, is the most important agriculturally and industrially, although the Alpine mountains, lakes and valleys are generally the best known parts of Switzerland.

THE CLIMATE

In a mountainous country like Switzerland, the wide differences of elevation produce a corresponding variety in climatic conditions. Whereas the purity of the atmosphere stands in direct ratio to the height above sea level, its warmth is in

inverse ratio to these gradations in height. Situated within less than two degrees of latitude ($45^{\circ} 49' 2''$ — $47^{\circ} 48' 32''$), Switzerland nevertheless has a normal climatic range of 34° . There are the deep sheltered valleys in the south which enjoy the soft warm climate of Northern Italy in consequence of their protection from the north wind, their relatively low elevation above sea level, and their exposure to the sun. On the other hand, but very few miles away there is the bracing and invigorating climate of the Alps, whose effect is derived principally from the dryness and purity of the atmosphere. In the central basin the summer is neither too hot nor is the winter too cold, and the climate here approximates that of Central Europe generally. As the crests of the Alps form a gigantic dividing wall between the polar and equatorial winds, rainfall is generally abundant and the country is consequently well watered.

POLITICAL CHARACTER AND DIVISIONS

Switzerland is the oldest existing democracy of the world, its political foundations antedating to 1291, when the men of Uri, Schwyz and Lower Unterwalden entered into a defensive league. By 1353 the league included eight members, and by 1513 thirteen. In 1648 the league was recognized as independent of the Holy Roman Empire. In 1798, under the influence of France, the unified Helvetic Republic was formed, and in 1803 Napoleon by the Act of Mediation gave the Swiss a new constitution and out of the lands formerly allied or subject increased the number of cantons to nineteen. In 1815 the perpetual neutrality of Switzerland and the inviolability of her territory were guaranteed by the Great Powers, and the Federal Pact which had been drawn up by the Swiss and which included three new cantons was accepted by the Congress of Vienna. This Pact gave place to a new constitution in 1848, prepared without the interference of the Powers, and the Constitution of 1848 was in turn superseded by a new constitution in 1874 which is the one now in force.

The Swiss Constitution, although in many particulars dissimilar, bears certain resemblances to that of the United States in its Federal structure. The supreme legislative and executive authority are vested in a parliament or Federal assembly of two chambers: (1) the States' Council, which is composed of 44 members (i.e., two representatives from each independent state or canton, the mode of whose election and the term of membership depend entirely on the canton); (2) the National Council consisting of 189 members, elected by the individual cantons every three years by ballot at the ratio of one deputy for every 20,000 inhabitants. These two chambers united are called the Federal Assembly and represent the supreme government of the republic. The chief executive authority is deputed to a Federal Council consisting of seven members and elected for three years by the Federal Assembly. It is only through this executive body that legislative measures are introduced in the deliberative councils. By the *popular initiative*, however, the first steps toward legislative action may be taken, and moreover laws passed by the Federal Assembly may be vetoed by the popular voice. The principle of the *referendum* is also frequently acted upon.

The President, who takes the portfolio of Foreign Affairs, and the Vice-President of the republic, are elected every year by the Federal Assembly from among the seven Federal councillors. The President is not eligible for re-election as President for two consecutive years. It usually happens that the Vice-President of one year becomes the President for the next. The seat of government is at Berne. At Lausanne, however, is located the Supreme Court of the Confederation, consisting of twenty-four members elected by the Federal Assembly which also designates annually the president of the bench.

THE CANTONAL AND URBAN POPULATION

From the new census figures published in March of 1921, it was found that the total population of the twenty-two cantons was 3,887,352, or a gain of 13 per cent

over the census statistics of 1900 and a 3.3 per cent increase over those for 1910. There are of course wide variations in the density of the population, and the highest figures are naturally reached in the plateau and the lowest in the Alpine district. For the country as a whole, however, the average is 243 persons per square mile, which is a very large figure considering the great amount of Swiss territory occupied by mountains. Such a density has only been rendered possible by intensive agricultural and industrial development.

Although Switzerland has no cities of metropolitan dimensions, yet there are thirteen municipalities in the basin district of the north and west with a population of over 25,000, the most important of which—Zurich, Basle, Geneva, and Lausanne—are large cities in miniature. There are some twelve other towns with a population of between 10,000 and 20,000. In order of importance the first thirteen cities are as follows (the small figures after the population of each city represent the increase or decrease per cent as compared with the census of 1910):—

Zurich, 207,424, +8; Geneva, 135,771, +10; Basle, 135,749, +2; Berne, 105,689, +15; St. Gall, 70,139, -8; Lausanne, 69,328, +5; Winterthur, 50,116, +8; Lucerne, 44,370, +11; La Chaux-de-Fonds, 37,681, +11; Bienne, 34,572, +7; Neuchâtel, 23,348, -2; Fribourg, 20,643, +1; Schaffhausen, 20,180, +11.

RELIGION AND LANGUAGE

Reference has already been made to the natural physical barriers shutting off one part of Switzerland from another. But also dividing the population are the demarcations in their language and religion. German is spoken by about 70 per cent of the population and predominates in sixteen cantons occupying the northern and central sections of Switzerland. French is spoken in the five western cantons by about 21 per cent of the total population, and Italian by one canton only by about 8 per cent of the population. A peculiar dialect known as Romansch is still spoken in the canton of the Grisons in the east of the country by about 1 per cent of the people. Italian is the only language that is making any appreciable signs of increase, due principally to Italian immigration.

As regards religion, some 57 per cent of the inhabitants are now given as Protestants, some 41 per cent as Catholics, while the remainder are made up of Jews and adherents to other faiths. Protestants are in the majority in twelve cantons and Catholics in ten. It may be stated further that religious propensities do not necessarily correspond with the boundaries of three languages, but rather follow historical and geographical causes.

THE IMMIGRATION PROBLEM

One additional observation on the constituents of the population may be made, viz: that there has been a striking decline, owing largely to the war, during the past ten years in the number of foreigners resident in Switzerland. These foreigners decreased by 152,990, or by 27 per cent, between the taking of the last two census. The result has been that although the 1920 census shows a gain of only 3.3 per cent in the population over the 1910 census, yet the increase in the population of Swiss nationality was 8.6 per cent. This influx of foreigners was in pre-war days especially marked in the Swiss cities near the frontiers and consisted mostly of workmen, although among their number were many tradesmen and commercial travellers as well as an undesirable class of aliens. The presence of this last element particularly, and of the foreign-born generally, gave Switzerland both immigration and labour problems of no small dimensions.

HOMOGENEOUS NATION

The fact that Switzerland, despite natural difficulties and despite ethnological and religious diversities, has been able to weld together these different elements and merge its component parts into one homogeneous nation, is indeed a striking tribute to the genius of the Swiss democracy.

THE PRODUCTIVE LAND OF SWITZERLAND

The natural features of Switzerland preclude the total productivity of its soil. Of the country's total area, 28.4 per cent, or about 4,500 square miles, are entirely unproductive, consisting as they do of glaciers, snow-fields, rocks, and water, thus leaving approximately but 11,400 square miles which contribute to agricultural production. Altogether, Switzerland has but slightly more than half of the productive soil of New Brunswick.

The most striking fact with regard to Switzerland's arable land, however, is not so much its actual smallness as the relatively small proportion (16.4 per cent, or about 1,824 square miles) suitable for crops and gardens. Thus nature has set severe limitations to the supply of land available for such uses. Even with many mountain slopes given over to "perpendicular farming," the natural difficulties are such that field and garden crops are greatly restricted, the total area devoted to this cultivation only approximating the amount of cultivable land in the province of Prince Edward Island. It is not surprising then that a large part of the food crops consumed in the country must be imported.

More than twice this amount, however—some 4,000 square miles, or 35.8 per cent—of Switzerland's total productive area are under grass and meadows, while 29 per cent, or 3,306 square miles, is under forest, and 18.7 per cent, or 2,131 square miles, are under fruit.

Narrowly restricted though Switzerland's productive capacity is, and despite the many difficulties which have to be overcome, yet it is to be admitted that Swiss agriculture generally gets every ounce of fertility out of the soil. The rural population are patient and hard-working peasants, and to them belongs the principal credit for the results which have been obtained from Swiss agriculture. Nor is this to be wondered at. In this country, where the system of small holdings prevails, and where there are practically no large landed proprietors, the peasant farmer owns the land in his own right. This aristocrat of the soil therefore diligently and intensively tills it for his subsistence. To him his land represents his home and a definite "stake in the country." It is estimated that there are about 300,000 agricultural holdings in Switzerland, averaging less than 20 acres per unit and supporting over half of the population, or some 2,000,000 of people.

Surprisingly large, in view of what has been written, is the annual income derived from Swiss agriculture, which is stated to be some 950,000,000 francs per year. This home agricultural production supplies about 60 per cent of the food products required, while the 40 per cent imported calls for an expenditure of about 600,000,000 francs. But to offset this expense connected with the purchasing of Switzerland's food is the value of her foodstuffs exports, amounting to some 400,000,000 francs annually, and all of which, unlike her pure industrial exports, are made from locally produced material.

It is not strange therefore, in view of what Swiss agriculture has accomplished and especially during the war, that the Swiss agrarians have organized themselves into what politically may be termed the agrarian party, or known in Switzerland as the Peasants' League. This element in the government of the country exerts no little influence and stands four-square against the new highly protective duties on manufactured products which the industrial classes have succeeded in having authorized, although they favour the higher duties on food products which at the same time were enacted. There is naturally then a certain amount of political friction between the landowners and the large industrial interests. It may be, however, that each side will come to make mutual concessions in the face of increasing living costs, which cannot be oblivious to the much higher tariff which became law during the early summer of 1921.

DIFFERENT AGRICULTURAL PRODUCTIONS

In the years preceding the war—that is from 1905 on—the interest in the growing of grains was allowed to sag, principally because American and Russian supplies were cheaper than those produced at home. However, with the partial shutting off

of foreign markets in 1914 and 1915, special encouragement was given to the cultivation of cereals with the result that in 1918 the area under all grains was 5 per cent more than before the war, while the area sown in wheat showed an 86 per cent increase over the average area so cultivated in the quinquenniad 1912-16. In other words, the average of 97,000 acres devoted to wheat in the years 1912-16 was increased to 130,000 acres in the year 1918. The native wheat crops correspondingly increased from 96,800 tons to 142,500 tons, which amount was about sufficient for six months' consumption. During the last three years wheat production has somewhat fallen off, and it was estimated, for example, that the 1919 crop of 105,900 tons was only capable of meeting home requirements for five months, while the 1920 crop sown over 118,600 acres and yielding 97,805 tons, and the 1921 crop sown over 117,300 acres, and yielding 103,623 tons, were still lower. In fact it is very likely that Swiss wheat production will continue to decline in extent, as a continuance of its 1918 and even 1919 proportions would be to the disadvantage of the cattle-raising and milk industries which net larger returns than the growing of grain.

OTHER FIELD CROPS

The other principal field crops of Switzerland are: (a) rye (35,700 acres averaging 41,909 tons in the quinquenniad 1915-19, and 56,700 acres producing 45,823 tons in 1921); (b) oats (73,900 acres averaging 63,696 tons over the quinquenniad 1915-19, and 52,500 acres producing 44,155 tons in 1921); and (c) potatoes (135,800 acres averaging 817,719 tons in the quinquenniad 1915-19, and 112,900 acres producing 691,982 tons in 1921). Switzerland's sugar beet production amounted to 15,672 tons in 1920, practically all of which is destined for cattle food; her production of maize to 5,559 tons in 1921; and her production of barley to 12,941 tons in 1921. In the cantons of Vaud and Fribourg about 600 to 800 tons of tobacco are cultivated annually.

THE FRUIT PRODUCTION OF SWITZERLAND

Swiss fruit enjoys a fame in Europe not unlike that of the Niagara Peninsula fruit in Canada.

Much land which was formerly given over to the cultivation of the vine is now owing to vine diseases, to the poor grape harvests, and to the competition of foreign wines, planted with fruit trees. It is estimated that there are some 14 to 15 millions of fruit trees scattered throughout the country, whose production oscillates between 70 and 80 millions of francs per year. The Swiss preserve and jam industry has taken on accordingly important proportions and a large part of the output is exported.

In southern Switzerland along the shores of the lakes and in southwestern Switzerland grow the best wine-producing grapes. In five of the cantons the grape is largely cultivated, and chiefly in vineyards terraced with extreme expenditure of skill and labour upon the sides of steep hills and even to a height of some 3,300 feet above sea level. The wine industry, however, is suffering under competition from Italy, France, Spain, and Germany, but still produces about half of the annual consumption. Some 45,700 acres were devoted to grape raising last year (1920), yielding a production of 10,338,800 gallons, which was over 2,000,000 gallons less than the average production of the five-year period 1915-1919.

ANIMAL HUSBANDRY

It is not on the side of animal husbandry that Swiss farmers have been most successful, and nearly three-fourths of the total value of their annual production is due to this branch of agriculture. An important number of hogs and some goats are raised, but beef cattle, cows and the milk products derived therefrom are the fundamental reliance of peasant cultivators.

The extension of the Swiss pasture land and the quality of the herbage grown are the two determining factors which favour this raising of cattle. In fact, in the northeastern cantons of St. Gall and Appenzell the meadows cover about 90 per cent of the land cultivated, while there are over two and a half million acres of pasture land throughout Switzerland. With the coming of spring the cattle are taken out of the stalls, located in the basement of the chalets, and driven to meadows upon the lower levels of the nearby mountains. Summer comes and higher pastures are sought out by the herdsmen and their flocks. Not only the richest grass but whole fields of aromatic herbs and flowers spring up luxuriously in these mountain meadows as fast as the receding snow leaves the ground open to the sun, and it is to this luxuriant pasturage that there is attributed the peculiar purity and richness of the Swiss milk and dairy products. When the autumn advances the cowherds and their flocks return once again to the villages on the lower levels. Cheese, condensed milk and milk chocolate, famed throughout the world, are the principal products of this form of Swiss agricultural industry.

THE OUTBREAK OF FOOT-AND-MOUTH DISEASE

The outbreak of foot-and-mouth disease among Swiss cattle in 1919 caused severe economic injury to the agricultural classes and its continuance on down to 1921, has resulted in a somewhat heavy loss of animals, necessitated smaller profits, and entailed a heavy expense for the replacement of stock. The authorities have taken the necessary measures to combat the disease, and it is now practically checked. The total value of Swiss cattle at the time the foot-and-mouth disease appeared was over one billion francs.

NUMBER OF ANIMALS

The latest statistics available place the number of head of cattle in Switzerland at 1,432,491. There are also some 464,402 pigs, 263,729 sheep, 349,794 goats, and 123,762 horses.

NATURAL RESOURCES—MINERALS

So great has been the bounty of nature to Switzerland as regards climate and beauty of landscape, that one is apt to forget how stepmotherly she has been in other ways. Switzerland in fact has very few natural resources. Coal and iron, the industrial bread of any country, have to be practically all imported. True there are deposits in the central Alps of such metals as iron, gold, silver, copper, lead and nickel which long ago were exploited, but their paucity, the difficulty of communications, and labour costs have led actually to their abandonment. Only some 10,000 tons of iron ore and about 4,000 tons of anthracite are extracted annually from Swiss mines. Peat is more abundant, there being some 250 peat fields, and this production was intensified during the war. But the most important natural riches of Switzerland are its building stone, cement, salt and asphalt. Granite, gneiss, limestone and marble are all found in important quantities and some 70,000 tons of salt are produced annually. There are some 632 mineral springs in Switzerland noted for their iron, sulphur and alkaline qualities. Apart from the foregoing, the mineral resources of Switzerland are negligible. Altogether about 12,000 are engaged in the mining industries.

THE FISHERIES

Fresh lake and river fish are quite plentiful in Switzerland. The annual yield from the fisheries amounts to some eight million francs. Both the Federal and Cantonal Governments subsidize hatcheries, and in 1919 there were some 216 of these piscicultural establishments which produced fry of various species to the number of 128 millions.

THE FORESTS

Timber is grown principally in the basins of the Rhine and the Rhone, the entire forest area covering some 2,105,214 acres. Of these, 91,587 acres are cantonal forests, 1,403,772 acres belong to municipalities and other corporations, and 609,855 acres are privately owned.

The annual cut amounts in value to approximately 40 million francs. The floods which occurred toward the middle of the last century showed the necessity of planting new woods, and consequently a sane policy of reafforestation has been evolved. Between 1,000 and 2,000 acres are re-wooded every year, while in 1919 over 16 million trees, mostly coniferous, were planted. Since 1897 the Confederation has had the oversight of all the forests, either directly or by means of subsidies granted to the cantons for the purpose of reafforesting the depleted districts and for ensuring proper maintenance.

LUMBER PRODUCTION

The table which follows shows the production of wood in Switzerland classified by the kind of trees, for the year 1908. These figures were drawn up by the Swiss Inspectorate of Forests in 1914:—

	Production in Cubic Metres	Per cent of Total Production
Spruce and silver fir.. . . .	1,122,520	86.06
Scots fir.. . . .	33,395	2.56
Larch.. . . .	20,565	1.58
All other resinous woods.. . . .	1,660	.12
Total resinous woods.. . . .	1,178,140	90.32
Beech.. . . .	47,230	3.62
Oak.. . . .	42,885	3.28
Walnut and other nut trees.. . . .	8,965	.69
Ash.. . . .	6,490	.49
Fruit trees.. . . .	5,825	.44
Poplar.. . . .	4,235	.33
Maple.. . . .	3,775	.29
Linden.. . . .	2,010	.15
Alder.. . . .	1,470	.12
Elm.. . . .	855	.07
Yoke elm.. . . .	635	.05
Birch.. . . .	490	.04
Other leafy trees.. . . .	1,345	.11
Total leafy trees.. . . .	126,210	9.68
Grand total.. . . .	1,304,350	100.00

THE INDUSTRIES OF SWITZERLAND

Switzerland is a country of very great industrial development. Unlike agriculture, where the small holding prevails, Swiss industry is carried on by large capitalists, and any industrial survey of the country shows the important results which have been reached in face of heavy odds. The geographical position of the country, the scarcity of raw materials, the difficulties inherent in transport, were all unfavourable to industry. These difficulties, however, have been overcome, and Swiss manufactures as silks, ribbons, embroideries, chemicals, watches, jewellery, machinery, etc., are deservedly conspicuous in the world's production. Not only in these fields but in many other lines of industrial output a very high standard of article is turned out and in very considerable quantities.

A statement published by the economic section of the League of Nations shows the export trade of the principal world countries in relation to their respective populations. This statement is reproduced hereunder:—

Countries	Exports in Dollars per head of Population	
	1913	1919
New Zealand.. . . .	94	199
Switzerland.. . . .	69	152
Canada.. . . .	56	133
Australia.. . . .	76	115
Holland.. . . .	200	89
Great Britain.. . . .	57	5
United States.. . . .	24	72
Belgium.. . . .	93	40
Sweden.. . . .	38	66
France.. . . .	34	27
Japan.. . . .	6	19
Italy.. . . .	14	15

From the foregoing it is evident that in actual figures Switzerland stood second and next to New Zealand, but if there is taken into account the fact that New Zealand exports principally raw material, the pre-eminent position occupied by Switzerland as an industrial country is apparent. With an area of some 16,000 square miles, and with a population of less than four million, Switzerland exported goods, nearly all of which were industrial products, to the value of 3,298 million francs in 1919, or that is about 825 francs per head of the population. What then in more detail are these Swiss industries?

THE TEXTILE INDUSTRY

The Swiss textile industry comes first in importance, and was responsible for no less than 1,500 million francs' worth of export trade, or about one-half of the country's total exports in 1920. It is also among the oldest industries of Switzerland, and has been the cause of the development of the Swiss machine industry. According to the industrial census of 1918, there are approximately 128,000 hands or about one-third of the total number of Switzerland's industrial workers employed in the 2,609 plants appertaining to the textile industry.

THE SILK INDUSTRY

Of the textile industries, silk weaving is not only one of the most important but also one of the oldest branches. As long ago as the thirteenth century, light silk stuffs were being woven at Zurich, but the limitations of the home market and the wars of those days caused the trade to disappear. It was revived, however, in the middle of the sixteenth century at the hands of Protestant immigrants from what is now northern Italy. Since that time the silk industry has gone on expanding and auxiliary industries have developed, with the result that the various branches of the Swiss silk industry bear to-day an international character, owing to the large export trade which has grown up, the necessary importation of the raw material, and the numerous subsidiary houses which have taken root abroad.

The most important branch of the Swiss silk industry is that of textile weaving. These fabrics were originally turned out on hand looms, of which there were not less than 30,000 in 1880. But in the last quarter of the nineteenth century the power loom came into operation, and Swiss industrialists were among the first to make successful use of this medium of production. The silk-stuff weaving industry, centering in Zurich and along the lake of the same name, normally employs about 15,000 power looms, about 1,500 hand looms, and approximately 18,000 factory hands and employees. Every description of silk fabric with the exception of silk tulles is manufactured, the output totalling some 45 million metres per year. The production of piece-dyed goods, which a few years ago was unimportant in Switzerland, as was also the manufacture of stuff for neckwear and furniture, has latterly made considerable progress. These fabrics have found their way to all parts of the world,

and about 80 to 90 per cent of the annual production is sent to foreign countries. In 1919 the value of silk textiles exported amounted to 413 million francs or more than four times the value exported in 1913. The quantity also was higher and rose from 2,020 tons in 1913 to 2,903 tons in 1919. The exports for 1920 were, however, lower owing to a slackening demand and exchange depreciation in foreign countries. Prior to the war, the British Empire took about one-fourth of the total Swiss production. Canada in 1919 bought silk fabrics from Switzerland to the value of 19 million francs as against 13 million francs in 1913.

The silk-ribbon industry has its headquarters at Basle, and was introduced into Switzerland by the Huguenots in 1573. There are about 10,000 ribbon looms in Switzerland at present, half of which belong to the domestic industry. The number of hands employed approximates 12,000. All kinds of silk, half-silk and velvet ribbons are made at Basle, but particular attention is paid to the high-class and medium qualities. About four-fifths of the annual production is exported, Great Britain and the colonies always having been Switzerland's best customers. In 1913 Canada bought Swiss ribbons valued at 2,000,000 francs and in 1919 Swiss ribbons valued at 3,400,000 francs.

The manufacture of silk bolting-cloth obtains special distinction as this fine gauze used by millers is made exclusively on hand looms, of which about 1,500 are in operation, and as Switzerland has practically a monopoly in this world trade. About 37 tons were exported in 1919, Canada sharing in these exports to the value of 400,000 francs.

Another important branch of the Swiss silk industry is that of silk-twisting. This industry is divided into: (1) raw silk throwing, i.e., the manufacture of organzine and particularly wefts, and (2) into the manufacture of sewing and embroidery threads. This trade gives employment to a few thousand female hands. The native weft industry is suffering from French and Italian competition, while the silk thread part of this industry is frequently obliged to yield to cheaper artificial silks.

The Swiss floss-silk or schappe industry occupies a very important position and gives employment to some thousands of hands. Its products are mainly absorbed by the velvet trade, although schappe is also increasingly finding its way into the silk stuff and ribbon industries. In 1913 some 1,500 tons were exported valued at 34 million francs, while in 1919, 1,300 tons were exported valued at 65½ million francs.

The manufacture of artificial silk is also making headway in Switzerland, although there is only one important factory devoted to this industry. The bulk of this output is utilized at home by the hosiery and knitted goods trade.

Although the lull in present international commerce is apparent in the Swiss silk industry, evidence of which is seen in the reduction of these silk exports from 236 million francs in the first half of 1920 to 97 million francs during the first six months of 1921, yet with a revival of trade exchanges there can be no doubt that this silk industry will again find heavy demands made upon it by the more important markets of the world.

COTTON SPINNING AND WEAVING

The cotton textile industry of Switzerland has lost a great deal of its former importance owing to foreign competition. Fifty years ago the industry's output was almost entirely devoted to export; now it is used mostly at home. There are a million and a half of spindles, working up annually some 25,000 tons of raw cotton, and about 17,000 looms in this Swiss industry of to-day. A considerable part of the production, especially the transparents, is used as the basis for the St. Gall embroidery industry. Cotton prints constitute an important branch of the output.

THE KNITTED GOODS AND HOSIERY INDUSTRY

The Swiss knitted goods and hosiery industry now consists of about 62 firms employing some 6,000 hands. Various kinds of products are turned out as fine and coarse knitted goods; ribbed underclothing in wool, cotton, silk and artificial silk,

woven on cylindrical and flat machines; tricot shirts with interwoven fancy insertions; woven suits; stockings from the large ribbed sorts to the finest quality; fine and medium knitted gloves in silk and woollen thread; crêpe de santé and artificial silk goods as shawls, caps, etc. The exports derived from this knitted goods and hosiery industry increased from 17 million francs in 1913 to 59 million francs in 1919.

THE EMBROIDERIES OF SWITZERLAND

Probably that branch of the Swiss textile industry which is best known abroad is the manufacture of embroideries. At the last industrial census there were some 1,859 embroidery establishments operating 23,000 machines and employing altogether some 60,000 persons. This industry centres in St. Gall, while the hand-made embroideries come mostly from the nearby canton of Apenzell and give employment to about 3,000 women hands. All along the gamut from handkerchiefs to dress goods and fancy and novelty embroideries, the production ranges, and this industry was responsible for the largest individual showing of Swiss exports in 1919, when the embroideries exported amounted to some 426 million francs. Although this value was twice that of the exports for 1913, yet the actual quantity exported fell from 9,228 tons to 5,904 tons in 1919. The value of the embroidery exports (5,583 tons) for 1920 was 413 million francs. Canada bought 485 tons of Swiss embroideries in 1912, the highest figures recorded, against 43 tons and 137 tons in 1919 and 1920 respectively.

The excellence of Swiss embroideries lies in the fineness of the fabric used, especially as regards dainty transparencies, and in the irreproachable quality of its production as regards styles, designs and finishing processes.

Though orders have latterly greatly declined from abroad, once the present transition stage in international commerce is surmounted, it would seem most likely that St. Gall embroideries will again have a large number of customers in Canada, and in the other countries which were formerly important clients.

OTHER TEXTILE INDUSTRIES

Another special branch of the Swiss textile industry, with headquarters at Aargau, are the weavings of hemp, tussore and artificial silk for hats. There are about twenty-five firms in this line. These plaits or weaves are quite wonderful in colour and texture and have found many ready markets. Passing mention may also be made of the cheese-cloth and wrapping industry and of the smaller flax and woollen industries, employing in all some 7,000 hands, which centre around Berne.

It is rather a curious fact that a textile industry should have developed to the extent it has in Switzerland seeing that practically all the raw materials required have to be imported. And yet there is probably no world market of importance where Swiss textile goods are not to be found. The secret of the success obtained lies apparently not in any large-scale production but rather in the workmanship employed, which gives to Swiss textiles the superior quality they possess, and which allows them to compete in every part of the world.

THE WATCH-MAKING INDUSTRY

Swiss watches enjoy an enviable reputation in all parts of the world. The distinguishing characteristic of watch-making in Switzerland is the extent to which the division of labour is carried. There are about 150 different kinds of operations in manufacturing a watch, and the industry has so developed that there is a specialist for each distinct part. The main industry, like all other Swiss industries, is regional, and centres at Le Locle and La Chaux-de-Fonds in the canton of Neuchâtel, where there are some 400 different firms engaged in its various branches. Geneva, on the

other hand, is the home of the chronometer and jewel watch industry. Up till the end of the past century, watch-making was almost purely domestic in character, but by 1911 one-half of the operators belonging to this industry were housed in factories. There are in all some 1,200 firms in Switzerland employing upwards of 46,000 hands devoted to the making of watches.

In 1919, Switzerland exported 17,752,000 watches valued at 345,000,000 francs as against 15,549,218 watches valued at 182,849,199 francs in 1913, and as against 7,393,385 watches valued at 116,445,373 francs in 1903. In fact since 1893 the number of watch movements produced has quadrupled, and it is estimated that the Swiss watchmaking industry turns out a watch every half to three-quarters of a second. It is by no means mere haphazard that the word "Swiss" on watches stands throughout the world for precision, as the century-old occupation in this watchmaking industry has led to the creation of a highly efficient set of workers whose accuracy and skill can scarcely be surpassed. This is the principal reason why in international chronometer contests Swiss products generally come off the victor. Moreover, the carefully carried out division of labour, and the specialization in modern factories fitted up with automatic machinery, have made it possible of late to produce even cheap watches with a high degree of accuracy. In fact, specialization and standardizing have enabled the Swiss watchmaking industry to obtain a very strong position in every important market. In 1919 some 259,267 Swiss watch movements were exported to Canada, valued at 4,725,000 francs. The figures for 1913 and for 1920 were 277,397 and 303,608 movements, valued at 2,229,951 and 6,844,000 francs respectively.

JEWELLERY

Akin to the watchmaking industry is the manufacture of jewellery and the work of the gold- and silver-smiths. Some of these hand-made products are exceptionally artistic and beautiful, and contributed 13,500,000 francs to Swiss export trade in 1920. Cut jewels were also exported in 1920 to the value of 18,000,000 francs.

THE CHEMICAL INDUSTRY

The harnessing of the abundant Swiss water-power, together with the existence of trained and skilled chemists, the majority of whom are graduates of the technical schools and universities of Switzerland, have led to the development of a very important electro-chemical and electro-metallurgical industry in the country.

Basle is the centre of the electro-chemical manufactures, and here are produced a wide range of aniline dyes, various dyestuff extracts and artificial indigo, in very appreciable quantities. The war gave a considerable fillip to the production of these chemicals, which were popularly supposed to be the monopoly of German manufacture, and the exports of aniline dyes went up from 25 to 1,236 million francs between 1913 and 1919, while the export value of artificial indigo rose from 39 to 122 million francs. The writer visited two of the largest chemical works at Basle, and after a cursory inspection of the plants was quite convinced that Germany has no monopoly of the colour trade, which in Basle dates back to 1856. The four principal chemical plants to-day at Basle have 168 trained chemists, 757 employees, 158 foremen, 4,400 workmen, 87,894 square feet heating surface of steam boilers, and 32,120 electric h.p. Sufficient evidence has been adduced to show the importance of the Swiss colour industry.

Although the chemical-pharmaceutical industry of Switzerland was established some twenty-five years ago, its real development has taken place within the last ten years. The importance of this branch of the chemical industry is not due to the number of persons engaged, but rather to the scientifically prepared and carefully tested products turned out in what are really not factories but the most up-to-date modern clinics. Co-operation with the medical and scientific men outside the actual factory has also been one of the most important factors in the development of this

industry. Every product which comes out of these laboratories, and which promises therapeutical usefulness, is tested elaborately and its effects are controlled on a vast amount of clinical material before it is allowed to enter into commerce. It is not pertinent here to mention the various pharmaceuticals turned out, but particular reference may be made to the alkaloids of opium, atrophine, guaiacol, and the creosotes. The exports of these Swiss products have risen from 17,687,385 francs in 1913 to 26,533,000 francs in 1920. Canada took pharmaceuticals from Switzerland to the value of about 50,000 francs in 1920, while these Swiss specialities are known in every important country.

There are six important firms manufacturing synthetic perfumes, which industry has its headquarters at Geneva, and is carried on principally for export. The exports of perfumes and soaps amounted to over 16,000,000 francs in 1919.

Before the war the production of photographic materials in Switzerland was insignificant but, with the Swiss stock of supplies becoming exhausted, one of the largest Basle chemical plants took up the manufacture of photographic chemicals. This society is now able to offer photographers not only developers in the dry state and in concentrated solution, but also eight groups of dry plates with a sensitiveness ranging from 16 to 500 H and D, suitable for all classes of amateur and professional work.

The electro-metallurgical industry in Switzerland produces by the electrolytic process such products as metallic sodium, caustic soda, chlorine, chloride of calcium and other chlorine derivatives, the persulphates, perchlorates, ferro-chrome, etc. The aluminium industry at Neuhausen, the writer understands, was the first firm to produce pure electrolytic aluminium. This electro-metallurgical industry grew considerably during the war, and the exports of calcium carbide, ferro-alloys, and aluminium rose respectively from 32,000 tons, 16,000 tons, and 7,000 tons in 1913 to 76,000 tons, 23,000 tons, and 11,000 tons in 1917-18.

THE MACHINERY AND ALLIED TRADES

The development of the spinning and weaving industries in Switzerland led to the establishing of factories for the making of textile machinery, while the important water-power resources of the country and the Federal policy of electrifying the railways have been responsible for creating a large electro-technical industry. Naturally other plants for producing industrial equipment grew up, with the result that the engineering and allied industries to-day come first as regards the actual number of operators employed. The products of some of these firms are justly celebrated as for example, to mention a few, the water turbines of Eschr Wyss, the locomotives of the Sulzer company, the dynamos of the Oerlikon works, and the electric traction equipment of the Brown & Boveri Company. Given the nature of the Swiss textile industry and given the country's white coal wealth, the Swiss market in itself affords ample scope for much of this manufacturing. But Swiss machinery also goes abroad in very appreciable quantities. In 1916 these exports totalled some 71,662 tons, as compared with 56,124 tons in 1913. During 1920 the exports were slightly under pre-war figures.

There were at the industrial census of 1918 some 842 firms classified under the heading of machinery manufacturers, employing 65,803 workmen. Among the products turned out may be mentioned steam and internal combustion engines, hydraulic motors, flour-milling machinery, textile machinery, paper-working machinery, camions, locomotives and rolling stock, dynamos, electric locomotives, electrical material, and scientific instruments.

The principal manufacturing zone is Zurich and the neighbouring towns of Winterthur, Baden, Schaffhausen, and Oerlikon.

THE PREPARED FOOD INDUSTRIES

The industries devoted to food production embrace several important branches. Among these come first the cheese, chocolate and condensed milk manufactures, each

of whose products is favourably known in all parts of the world. Preserved fruits and vegetables also figure prominently in this industrial category. There are also some 140 mills grinding flour for local requirements, while sugar refineries turn out about 10,000 tons per year. Beer is manufactured in 126 breweries to the amount of some 100,000 hectolitres or 2,200,000 gallons per year. Some 500,000 hectolitres or 11,000,000 gallons of wine are also produced annually. In this connection may also be mentioned the cigarette industry. Several well-known Egyptian and English cigarette houses by means of Swiss subsidiary companies take care of a large part of the native consumption. Altogether there are 191 plants given over to food and drink production, while some 27,187 hands are employed in these industries. Some 35,680 tons of cheese and some 16,817 tons of chocolate were exported in 1913.

OTHER SWISS INDUSTRIES

Passing reference may also be made to the tanning and boot and shoe industry, the latter of which turns out between five and seven million pairs a year and of which a large percentage goes abroad; to the cellulose and the paper industry; to the metal industry; to the pottery industry; to the musical instrument industry. Other manufactures include such commodities as toys, aluminium ware, electrical goods, paints and varnishes, etc. In fact Swiss industries practically cover the whole field of modern production, and though the country is not economically self-contained even as regards manufactured products, and though many manufactured goods are therefore imported, yet any study of the industrial phase of Switzerland's economic life reveals the very diversified range of existing production.

Let it also be said in all fairness that the quality of Swiss manufactured products is invariably of an exceptionally high order and compete, so far as they are exported, not with inferior goods of the same category but with the very best that the workmanship of any country can turn out.

THE HOTEL INDUSTRY

No account of the economic organization of Switzerland would be complete without a brief reference to the hotel industry or "*l'Industrie des Etrangers*" which has been so highly developed in this country. By means of this industry the Swiss coin into hard cash many of those otherwise large portions of their territory which would be quite unproductive by any usual economic process. The far-famed mountains, lakes and glaciers of Switzerland, however, were veritable magnets, annually drawing into this "play-ground of Europe" before the war some three and a half million tourists and health seekers. Altogether there were formerly some 3,500 hotels largely devoted to this tourist traffic and employing altogether some 43,000 persons. Some half billion of francs represent the present capitalization of this industry, whose gross receipts in pre-war years amounted to over 2½ billion francs. Naturally other millions of francs are spent in transportation and local purchases. It is by her enterprise in this field that Switzerland adds large purchasing power to the home market and provides no inconsiderable share of the balances she needs in other countries for the buying of raw material, foodstuffs and manufactured goods.

In the last few years the high value of the Swiss franc has brought about an unfavourable situation in this great hotel industry, especially as Germans and French, who used to give the largest patronage to the Swiss hotels (some 20 per cent and 12½ per cent respectively), have not felt disposed latterly to accept the definite loss of their own currency to the extent which was necessary in order to make a holiday stay in Switzerland. This last summer the tourist traffic was considerably improved by the influx of Americans, but until hotel prices are still further reduced and until European exchanges are more stabilized, a return to the once flourishing conditions of this hotel industry can hardly be expected.

INDUSTRIAL STATISTICS

The table which follows shows the number of establishments at the industrial census of 1918, according to specified trades, together with the number of hands employed in the respective industries:—

Industries	Number of Establishments	Total Workmen
Cotton industry..	313	26,043
Silk industry..	211	30,266
Wollen industry..	66	6,696
Linen industry..	31	1,356
Embroidery industry..	828	22,855
Other textiles industries..	129	4,563
Ready-made clothing and equipment..	1,031	36,169
Food and drink industries..	791	27,187
Chemical industry..	270	17,764
Gas, water and electrical industry..	276	4,713
Paper industry..	700	18,903
Wood industry..	1,325	22,864
Metals industry..	902	36,543
Machines and apparatus industry..	842	65,803
Jewellery, watchmaking industry..	1,222	46,475
Earthen and stone industry..	390	12,970
Total..	9,316	381,170

THE SWISS INDUSTRIAL CRISIS

During the past year Swiss industries, in common with those of other countries, have been passing through a severe crisis, and the end is not yet in sight. This depression is the more acute in Switzerland owing to the fact that, as the country has to import a large part of its food products and the bulk of its raw material, it is by exportation principally that the country pays its way. Moreover as, according to the latest statistics, about 1,300,000 persons are directly interested in some branch of production, commerce or transportation, the industrial crisis has made itself profoundly felt among the population, especially as some 137,000 are at present practically out of employment.

In spite of the difficulties connected with the importation of raw material from 1914 onwards and the many obstacles which Swiss exports had to succeed in meeting during the war, Swiss industry on the whole, up to the second half of 1919, did exceptionally well. Naturally a number of mushroom firms sprang up only to disappear with the war business over. Satisfactory profits were, however, generally realized, and the majority of Swiss industries were able to consolidate their position. With the coming of the Armistice, however, the old competitors appeared in the world's markets. New and highly protective tariffs were enacted in several states, and what was most serious of all, a collapse of the exchanges followed. The result was that the many commodities which had been overproduced and at high costs, were either unable to be absorbed by the countries whose money had little value or were too high priced for other countries whose exchange as in the United States, was at a premium. Prices of raw material began to tumble, and as Swiss industrialists had acquired considerable stocks for manufacturing purposes, many companies were economically embarrassed. The first to suffer were the watch and embroidery industries, both belonging to the de luxe category. The electro-chemical firms had to reduce their staffs, while the furniture and paper industries were the next struck in the spring of 1920. Towards the summer of last year (1920) the textile industry in its many branches was adversely affected by the crisis, and was obliged to reduce the working hours and in some cases to close up its doors. The straw weaving and auto factories were the next to suffer, the latter being seriously influenced by foreign competition and the liquidation of war stocks.

In the winter of 1920-21 the industrial slump became general and workmen had to be released and hours shortened in the tanning, boot and shoe, chemical, tobacco, pottery, and glass industries. The building industry, owing to the high price of material and labour, also fell flat.

Only the mechanical industries—and especially those devoted to electro-technical production—contained to prosper thanks to the orders dependent on the electrification of the Federal and secondary railways, to the new hydraulic installations, and to orders which came to Switzerland from abroad, despite higher quotations, on account of the excellence and the reputation of Swiss electrical material. Since last spring (1921), however, even these foreign markets have been drooping, and with the exception of certain special orders the electrical and mechanical industry is not busy on overseas orders. Even there has been a slowing up in the further exploitation of the country's water powers. In fact it may truthfully be said that no Swiss industry has escaped from the depression, and the number of either totally or partially unemployed has increased from 9,668 in July 1920 to 136,167 at the 1st of October, 1921. This number, moreover, does not take into account those operators who are retained by their companies for mere repair work in the shops or for stock production.

To combat this industrial crisis, the Federal Government has raised the tariff, and has restricted imports. There are now some 190 products for which the Government's permission must be obtained before their importation is allowed. Principally among these may be mentioned leather, boots and shoes, lumber, paper, rubber, ready-made clothing, glassware, iron and steel products, automobiles, certain machinery, etc. These restrictions are to be effective till September 30, 1922.

From various interviews the writer had in Switzerland with prominent bankers, industrialists and business men, the inference was drawn that the cost of production must be lowered and that Swiss workmen would necessarily have to accept lower wages in order to tune up industrial output. At the end of 1920, for example, Swiss workmen in the machines trade—which may be taken as typical—were receiving three times what similar operators were receiving in Germany, Austria, or Italy, and from 40 to 50 per cent more than those in Belgium and France. Since December 1920, with the greater depreciated currencies in these countries, the Swiss wage has become perceptibly more disproportionate. Once manufacturing costs can be appreciably reduced, it may be expected that Swiss industry will stiffen and begin to thrive again.

All the various industrial export groups, except cheese, show a more or less marked falling off as the result of this industrial depression which has just been briefly described. In the table which follows it will be seen that machinery for the first time occupies the principal role in Swiss exports and has thus gone ahead of the embroidery, watch and silk exportations. The diminution in the foreign sales of chemicals is also quite evident. To interpret aright these figures it is naturally incumbent to take into consideration the lowering of prices.

SWISS EXPORTS FOR THE HALF YEARS 1913, 1919, 1920, 1921

In Millions of Francs

	1921	1920	1919	1913
1. Machinery.. . . .	138	156	103	55
2. Watches.. . . .	98	170	135	82
3. Cottons.. . . .	98	124	69	19
4. Silks.. . . .	97	236	146	55
5. Embroideries.. . . .	64	230	200	110
6. Chocolates.. . . .	32	46	45	25
7. Silk ribbons.. . . .	31	72	51	21
8. Aniline colours.. . . .	29	110	44	13
9. Cotton thread.. . . .	25	33	9	8
10. Boots and shoes.. . . .	19	39	19	9
11. Hosiery.. . . .	17	31	19	8
12. Condensed milk.. . . .	16	21	7	22
13. Silk schappe.. . . .	14	31	22	14
14. Cheese.. . . .	12	4	4	33
15. Straw manufactures.. . . .	11	24	16	9
16. Raw silk.... . . .	10	22	2	17
Total export.. . . .	1,009	1,765	1,214	664
Total import.. . . .	1,336	2,139	1,536	946
Unfavourable trade balance.. . . .	327	374	322	282

CAPITAL INVESTED IN INDUSTRY

According to figures just published by the Federal Government, there were altogether some 7,337 joint-stock companies in Switzerland with an invested capital of 5,209½ million francs at the end of 1920. Of this number some 2,136, disposing of 1,742½ million francs of capital, were entered as industrial enterprises. From 1917 to 1919 and on toward the middle of 1920, the capital issues very greatly increased. In an interesting table just printed by the Swiss Banking Corporation, it is shown that the paid-up capital of eighteen of the leading industrial corporations has increased by 134.4 per cent since the beginning of the war and now stands at 458.4 million francs. For more than a year, however, new issues have become pronouncedly more infrequent owing to the acuteness of the industrial crisis and the general lowering of prices.

SHRINKING PROFITS AND DIVIDENDS

It may further be noted that the net profits of these eighteen companies rose from 21 per cent of the invested capital in 1913-14 to 21.7 per cent in 1919-20, only to fall again in 1920-21 to 15.5 per cent. Moreover, the dividends paid by these same eighteen companies were 12.09 per cent of the invested capital in 1920-21, 15.75 per cent in 1919-20, and 13.13 per cent in 1913-14. There is also to be added that the majority of the shareholders in these companies bought their stock when the bourse quotations were considerably higher than to-day, although they now in many instances approach the fair value of the issue.

PERCENTAGE OF INCREASE ON SWISS INDUSTRIALS

The maximum reached by nine of the leading industrials on the Swiss bourse was attained in February, 1918, when the index number for these securities was 334 per cent above par. In December, 1918, the percentage stood at 277 per cent; in December, 1919, 210 per cent; in December, 1920, 126 per cent; in June, 1921, 133 per cent; and at the end of September, 1921, 137 per cent. The effects of the industrial depression are also seen herein.

FAILURES IN SWITZERLAND

Since 1918 the number of business failures in Switzerland has increased from year to year. In the first nine months of 1921 there were recorded some 472 failures as against 435 for the whole of the preceding year, and as against 343 failures in 1919 and 266 failures in 1918. Moreover, not a few commercial enterprises, especially among the hotels and secondary railways, have been kept from going into bankruptcy by special Government dispensations.

FUNDS FOR UNEMPLOYMENT

According to a Federal law of October, 1919, a special dole fund has been put at the disposition of the unemployed. This fund is made up of a one-third contribution by the firm which has found it necessary to retire any number of workmen and of a two-thirds contribution by the Federal Government, the cantons and the municipalities. Figures are not at hand concerning the amount paid by Swiss industrialists, but that it has been very considerable is evidenced in the fact that the Federal Government up to the present has paid over 80,000,000 francs into the fund. This necessary disbursement is a heavy toll at present on the business houses of Switzerland and adds to the difficulties of the industrial situation.

To sum up, it may be said that the present conditions obtaining in the Swiss industrial world are quite far from normal. The majority of mills and factories are producing but a fraction of their normal capacity, and comparative stagnation is the rule in export and import business. Among the causes of the present business inactivity and widespread unemployment, the high production costs and the appreciated Swiss franc stand out perhaps most prominently. The depression, however, is only to be considered as temporary and as a part of the present unsettled conditions in the world's economic life. Swiss industry is too well established and its international connections too strong to warrant any doubts as to the outcome of the hard times now prevailing.

THE WATER-POWER RESOURCES OF SWITZERLAND

It has already been pointed out that Switzerland has no coal in commercial quantities, and that as regards natural resources the country is relatively poor.

One exception, however, must be made, and that is for the Swiss water-powers. With her mountain currents, her lakes and rivers, Switzerland has for the size of her territory very considerable white coal wealth, which is playing to-day a very important part in the economic life of the nation and which is destined for still greater development. Not only are important sections of the Federal and secondary railways electrified by water-power, not only are large manufacturing plants driven by electricity so derived, but Switzerland is even able at present to export a certain quantity of electricity to Germany, France, and Italy. By thus cutting down coal imports, and by the actual exporting of electricity the adverse trade balance of the country is favourably affected.

Hydraulic engineers have officially estimated the water-powers of Switzerland at 4 million h.p. Of this total some 500,000 h.p. had been utilized by January 15, 1914. From 1914 to the end of 1920 an additional 300,000 h.p. had been exploited, thus leaving 3,200,000, or some 80 per cent, still to be commercialized. Switzerland has fifteen hydraulic installations equipped with more than 20,000 h.p., the average for the fifteen plants being some 40,500 h.p. The largest installation is that of Olten Gösigen, with 80,000 h.p. There are five other installations now under actual construction, which will yield an additional 252,000 h.p., while there are seven other projects being studied at present, two of which are for the Federal railways now using non-railway power stations. There were altogether in Switzerland at the end of 1920 some 6,871 hydraulic installations.

So wide therefore has the use of electricity become, that, although approximately but one-fifth part of the water-power of the country has been developed, not only do the cities and the large industrial enterprises have their electric illumination and motor power, but the peasants light their châteaux and stables with electricity and with it operate their pumps, churns, food cutters and threshing machines. In some cantons country roads are lighted for considerable distances with electricity.

Consideration is now being given to the linking up of the principal power stations so as to provide mutual assistance and compensation in case of dearth and abundance of water-power. In the winter of 1920 the record low flow of water in Switzerland proved a serious matter for a large number of the stations, and restrictions in various centres had to be imposed on electric consumption. This reduced power capacity therefore has shown the necessity of having a reserve accumulation so as to guarantee an adequate winter supply of energy. There is accordingly being taken in hand the establishing of storage reservoirs in the mountains, and a large company was formed in 1920 for this purpose of remedying the inequalities of water supply. Measures have been taken, moreover, to raise artificially the level of Lakes Geneva, Neuchâtel, and Lucerne, which action will provide greater reserves of water for winter. The creation of artificial lakes has also been undertaken for the same purpose.

A further interesting feature in connection with the development of the Swiss water-power resources is the regard being paid to internal river navigation. When the present projects have been completed, it is expected that nearly 200 additional miles of navigable riverway will have been obtained.

Under Federal license some 107,765 kw. of electric energy were authorized to be exported at the end of 1920: 24,296 kw. to France, 36,610 kw. to Germany, and 46,859 kw. to Italy.

The most important question before Swiss electrical engineers is the electrification of the country's railways, the total cost of which has been estimated at slightly more than a billion francs. The maximum motive power required will be about 600,000 h.p. The present necessity of importing coal for operating the railroads makes the problem of electrification very important from an economic point of view.

THE SWISS RAILWAYS

The beginnings of the Swiss railroads were somewhat later than in other parts of Europe. The country offered no large economic resources to be exploited, the natural difficulties connected with construction were very considerable, while the unsettled political outlook of the thirties and forties of the last century discouraged large investments. When the constitution of 1848 was adopted, there were only some 25 kilometres of railways in operation. With the establishing of more stable political conditions, however, interest began to be taken in transportation problems, and the year 1852 saw the real beginning of railroad construction in Switzerland. From that year to 1872, during which time a policy of private enterprise under cantonal control was followed, some 1,450 kilometres of railways were laid down. Then followed the period of private enterprise under Federal control till 1901, and from that date onwards the period of national ownership and operation. Altogether some 1,065,127,000 francs were paid for the few trunk lines embracing some 2,709 kilometres which were taken over by the State in 1901. To-day the State lines cover 2,882 kilometres.

The financial results of the railroads were quite satisfactory up till the beginning of the war, and the Swiss Government was able to keep redeeming its pledge to pay for the roads out of the profits within a sixty-year period from date of purchase. Since the war, however, the Federal railways have had to meet conditions of very great severity. As the turntable of Europe, Switzerland used to handle very large volumes of transit traffic. Not only was this reduced to a minimum, but tourist traffic fell off very appreciably. Added to these unfavourable factors were the rising costs of supplies and materials, especially those of coal, and the increased salaries of rail-

road employees. Motor lorry transport especially for short distances, moreover, became a competitor of the State Railways. It is only natural then to find, in spite of increased railway tariffs both for passengers and goods, that since 1914 deficits have yearly occurred. A Federal law of 1920 now allows for the complete extinction of the railway debt within a hundred years from date of purchase. The debt stood at 1,997,000,000 francs at the end of 1920.

With working expenses amounting to such a large percentage of gross receipts—viz., 91.9 per cent in 1920 as against 85.5 per cent in 1919—it is becoming increasingly difficult to pay the interests on outstanding bonds and to set aside funds for depreciation. It may be expected, however, that with a reduction in operating expenses, with a return of more normal traffic both tourist and transit, and with the industrial crisis once passed, the Swiss railways will be again able to pay their way.

To render Switzerland quite independent of foreign fuel supplies and thus reduce the cost of operation, the electrification of the entire Swiss system is being discussed in responsible quarters, but large amounts of capital (about two hundred million dollars) will be required to finance such an undertaking. At present 196 kilometres, or some 6.9 per cent, of the State lines are electrified, and 308 kilometres, or 10.8 per cent, in process of electrification. Another 141 kilometres, or an additional 5 per cent, will follow. There are now 60 electric locomotives on the State lines, and the Federal programme calls for 215 by 1924.

The Federal railways are also erecting their own independent power stations to supply eventually a total capacity of 500,000 h.p. Only one of the few principal stations has been completed, viz. that of Ritom (52,000 h.p.) on the St. Gothard line. Another of some 65,000 h.p. will probably be completed in 1922.

Apart from the nationalized railways, there exists a certain number of secondary lines bearing a more local or cantonal character. These may be classified as follows: (1) 739 kilometres of normal continental gauge, 400 kilometres of which have been electrified; (2) 1,503 kilometres of narrow-gauge lines, of which 1,023 kilometres have been electrified; and (3) 109 kilometres of cog-wheel lines, of which 68 have been electrified. The Rhetian railway in the Engadine (one-half of its 277 kilometres is electrified); the Jungfrau railway, 94 kilometres in length, whose terminus station is 10,371 feet above sea-level; the Gornergrat railway from Zermatt, which was the first mountain railway in the world which made use of electric traction, may each be particularly mentioned, inasmuch as they afford evidence of the highest electrical engineering skill.

The most important section of the railways now electrified, however, is the Loetschberg, which was completed in 1913. This railway owes its name to the Loetschberg massif, which is pierced by a tunnel 14.6 kilometres long. The railway covers 84 kilometres and connects Thun in the Bernese Oberland with Brigue near the Italian frontier, and thus makes an easy connection with Italy possible by means of the large Simplon tunnel on the Italian side at Brigue. A second Simplon tunnel, 19.8 kilometres in length, has now been completed. The St. Gothard tunnel and route are also in the process of being electrified, some 90 kilometres having been electrified up to the present. These lines were all doing very well before the war, in spite of heavy construction expenses, but the drop in the tourist traffic has also reacted severely on the financial state of the mountain and cog-wheel railways.

In short, it may be stated that the Swiss railways have been skilfully built and are exceptionally well managed. Rolling stock is on the whole in good condition, and it is an exceptional pleasure to travel on a Swiss train after railway experiences in some other Continental countries. The principal importance of the Swiss railways, however, from an international economic viewpoint, is found in their connection with Continental railways which tap the non-industrial and agricultural countries of the Near East. Should Basle become the important entrepôt of trade for the Near East which the proposed Rhine navigation scheme anticipates, Canadian firms will in all probability be exporting within the next few years to the Levant, and importing therefrom via the Swiss network of railways.

THE PORT OF BASLE

As Switzerland has no seaports, the bulk of her foreign trade is handled through Dutch, French, Belgian, and Italian ocean termini. Antwerp, Rotterdam, Genoa, Marseilles, Cette, and Bordeaux, for example, have been the transshipment ports most frequently mentioned on bills of lading routing goods to and from Switzerland. The last two mentioned having lost their Swiss importance since the war, Genoa in the south and more particularly Rotterdam and Antwerp in the north may now be considered as the principal ports in Switzerland.

However, there exists in Switzerland one harbour at Basle on the Rhine which has some economic importance at present and which offers appreciable potential utility. In fact, the leading transportation question now being discussed in Switzerland is the project for developing this harbour and the all-Rhine route from the sea to Basle. The scheme as it is conceived will if realized make Basle a very important collection and distributing centre in the very heart of Europe.

As a matter of fact, after unsuccessful attempts at working up the all-Rhine steamer route to Basle in the thirties and forties of the last century, another beginning was made in 1904, and since then, except during the war years, goods transportation on tugs has become more or less regular, and at the end of 1920 some half million tons of merchandise had been tugged over this route. Barges up to 1,000 tons can be accommodated at the Basle harbour, and the Cantonal and Federal Governments have shown their faith in this Rhine project by not hesitating in the further improvement and construction of the port.

Up till now no money has been spent on the deepening of the channel between Basle and Strasburg, and it is the regulation of this section which it is hoped will be taken in hand. The object of Switzerland is to secure a uniform channel from Rotterdam to Basle, so that not only steam tugs and barges may come up the river, but that small ocean craft may also use this waterway. The work of regulating the low-water level is now in the main completed for the distance of 701 kilometres from Rotterdam to Strasburg. At a medium level during an average period of 318 days per annum, there is no lower depth from the mouth of the Rhine to Strasburg than two metres, and it is stated by engineering experts that it would be possible to secure a channel of no less than two metres for 318 days a year between Strasburg and Basle. The cost of this deepening as calculated on a pre-war estimate would amount to about 30,000,000 francs, and in the course of ten to twelve years the open lock-free Rhine would be uniformly regulated between Rotterdam and Basle, a distance of some 826 kilometres. Such in brief is the Swiss project.

If a channel of four metres or perhaps even less could be maintained between Basle and the sea, there would be no difficulty in constructing a fleet of self-propelled vessels which would ply a regular service along the Rhine and so avoid the present two operations of breaking bulk at Strasburg and Cologne, operations which add very considerably to the cost of freight and entail even more cost in loss and damage to the finer classes of goods. Such a channel from Rotterdam to Basle would naturally be ideal when compared with the actual channel of to-day.

France stands out against the project and wishes to divert the Rhine between Strasburg and Basle into an Alsatian side-canal which would serve both as a waterway and for hydro-electric energy. It is not necessary here to enter into a discussion of the relative merits of the two proposals. The decision rests with the Rhine Navigation Commission authorized by the Treaty of Versailles, and on which sit members from France, Germany, Holland, Great Britain, Belgium, and Italy. It would seem very likely from the evidence at hand, however, that the Swiss project will be adopted, especially as the waterway from Basle downward to the sea would be a traffic route of international character equally serving the interests of both banks, whereas the canal would lie entirely in French territory.

One of the elements necessary for making an inland harbour at Basle via a navigable river, would therefore seem to be practical. Moreover, there are two features about Basle which should contribute greatly to the success of this enterprise. The first of these lies in the fact that behind Basle stretches a hinterland where goods are produced and consumed in large quantities; while in the second place distribution can be carried on from Basle cheaply and efficiently, owing to the indisputable advantage and unique position it has in the Swiss railway system. Given then the existence of these last two conditions, and assuming that a navigable river of 2, 3 or 4 metres is eventually achieved, Basle may some day become not a London, Hamburg or Antwerp, each of which are some sixty miles from the sea, but a trade centre of considerable national and international importance with its ship canal to the open sea and with its network of radiating railway lines spreading fanlike over the whole of Central and Eastern Europe.

The Basle harbour proposal therefore is not so daring and impracticable as would seem at first examination. The examples of Glasgow, Newcastle, and Manchester show what can be done when enterprising bodies of intelligent men set their minds to convert the ideal into the practical. The Clyde and the Tyne channels were not improved in a day, and the citizens of Basle are quite optimistic about and confident of the ultimate success of the project.

DEVELOPMENT OF MOTOR LORRY TRANSPORT

There has taken place a considerable development in Swiss motor lorry transport since the war, owing to the large number of army trucks purchased by Switzerland from the belligerent countries at a relatively low cost. Consequently, instead of the railways being used for short distance goods traffic, transport by lorry is extending throughout the country. In fact the railways, which have found it necessary to increase their rates on account of the higher prices of coal and the augmented operating costs, are becoming adversely affected by motor lorry competition. Owing to the comparatively small area of the country and particularly of the western, northern and northeastern sections, where Switzerland's industrial life centres, it would seem that this automotive form of conveyance will appreciably extend itself. Such a system saves the cartage from station of despatch to station of consignment, eliminates the double breaking of bulk, and avoids the inconvenience entailed in registration. For the smaller Swiss areas therefore this simpler method of delivering from door to door will in all probability become much more general.

POSTS AND TELEGRAPHS

In 1919 there were in Switzerland 3,963 post offices. By the internal service there were forwarded 204,193,427 letters, 71,994,682 post-cards, 63,827,677 packets of printed matter, 709,166 samples, 265,818,328 newspapers, and 8,520,336 registered parcels. In the international service there were forwarded 24,943,361 letters, 14,554,552 post-cards, 7,435,020 packets of printed matter, 1,171,118 samples, 5,086,994 newspapers and 2,236,805 registered parcels. Internal post office orders were sent to the value of 1,862,796,783 francs. Receipts, 1919, 85,441,899 francs; expenditure, 108,452,722 francs.

Switzerland has a very complete system of telegraphs, consisting in 1919 of 1,791 miles of line with 19,053 miles of wire. There were transmitted 3,296,921 inland telegrams, 4,410,552 international, and 347,346 in transit through Switzerland. The number of offices was 2,410. There were 792 telephone systems with 12,294 miles of line and 247,587 miles of wire; conversations were 121,954,377. The telegraph and telephone receipts in 1919 amounted to 49,335,070 francs; the expenditure to 46,532,450 francs.

AVIATION

Aircraft is employed very rarely for commercial purposes in Switzerland, and at present is confined mostly to pleasure-flying. An aerial post service was established in 1919 between four of the principal Swiss cities, but has since been discontinued. As the area of Switzerland is relatively small, some 16,000 square miles, as a large part of this territory is uninhabitable mountainous land, and as there exists a well-developed railway system radiating into all parts of the country, the reasons for establishing and expanding a national aerial service are not pressing. The Swiss authorities consulted gave it as their opinion that the future of Swiss civil aviation lies in associating itself with international long distance flights.

SWISS BANKING

Switzerland has a very large number of banks and financial institutions—over 300 in all—and these have a great diversity of character. First of all comes the National Bank founded in 1907, and which has the exclusive privilege of issuing bank-notes for a period up to 1937. It was organized as a joint-stock company with an authorized capital of 50,000,000 francs, half of which is paid up. At the close of 1920, twenty-three cantonal authorities held 38.23 per cent of its shares, twenty-three cantonal banks held 15.79 per cent, and the balance was held by 9,436 Swiss shareholders.

The situation of the bank is reflected in the following returns issued at the end of February, 1922:—

Assets	Millions of Francs	Liabilities	Millions of Francs
Gold.	543	Notes in circulation.	896
Silver.	162	Deposits.	104
Swiss Federal Loan Bank.	7		

According to Swiss banking law, the principal object of the National Bank is to regulate the money market, to facilitate payments and transfers of money, and to maintain a sound currency. It acts as the bank of the other banks. In order to avoid competition with the private banks, the sphere of activity of the central institution is restricted in the main to the issue of bank notes, the discounting of bills bearing at least two well-known signatures and valid for no more than three months, and to the purchase and sale of foreign bills and cheques. Forty per cent of the notes have to be covered by specie or gold, and the remaining sixty per cent by trade and bank bills acquired at home and abroad, and since 1918 also by credits running in foreign countries, subject to their being immediately available. The bank is further obliged to hold a reserve covering all its engagements maturing within the ensuing ten days. Of the profits, an amount representing 2 per cent of the paid-up capital goes to the reserves; then a dividend of not more than 5½ per cent is distributed on the paid-up capital. Out of the remainder fixed amounts are paid to the cantons according to their population, the surplus being distributed as to one-third to the Confederation and as to two-thirds to the cantons.

THE CANTONAL BANKS

Before the establishment of the Swiss National Bank, monetary circulation and especially the issue of the bank notes were left to forty-two individual banks, which were under the special supervision of the Federal authorities. The largest contingent was furnished by the cantonal banks, which are the State banks of the cantons and as such represent a special feature of Swiss banking organization. They number actually twenty-four, and with a few exceptions are the exclusive property of the respective cantons. As a rule the cantonal banks devote a considerable part of their

activity to the mortgage business. In some cantons, however, for instance in Berne, Geneva, Fribourg, Neuchâtel, and Vaud, it was found more convenient to constitute special mortgage banks to deal with the requirements of the farmers and the building trade. The savings departments of the cantonal banks are also very important, but their radius of activity is generally limited to the canton of origin.

In order the better to undertake financial operations on a large scale, such as the underwriting and issuing of cantonal loans, the cantonal banks formed the Union of the Swiss Cantonal Banks in December, 1907.

THE COMMERCIAL BANKS

The commercial banks constitute the most powerful factor of Swiss banking. Like the cantonal banks, the leading commercial banks have formed an association (the so-called "Cartel des Banques Suisses") for the taking over and issuing of government, cantonal, and municipal loans. The chief object of these banks is the financing of industry and of home and foreign trade. They are enumerated hereunder:—

Banque Commerciale de Bâle, Banque Fédérale, Banque Populaire Suisse, Caisse d'Epargne et de Prêt, Berne, Comptoir d'Escompte de Genève, Crédit Suisse, Leu & Cie, Société de Banque Suisse, and Union de Banques Suisses. Although practically all the foreign trade of Switzerland goes through the channel of the commercial banks, none of them have branches abroad except the Swiss Bank Corporation, which has an important office in London.

The Swiss commercial banks, being closely connected with the trade and industry of the country, have been largely affected by the fundamental changes brought about by the war in the economic and financial conditions of the country. The general turnover, after having heavily fallen in 1914, reached record figures in the following years. The rise, however, is only partly owing to greater business activity, as the major part of the increase is due to the enormous increase in prices, freights and insurances, which necessitated the transfer of larger sums of money than before the war.

Most of the leading banks have largely increased their capital since 1917, and the new shares, which were generally offered on liberal terms, were readily taken up by old shareholders. The premium on these new shares and the satisfactory results of the last years have allowed a considerable increase in the aggregate reserves. The bank deposits have also attained a very high level, while on the other hand acceptances have been greatly reduced, due chiefly to a more extensive use of cash payments in commercial transactions. An important increase, mostly in treasury bills, has also taken place in the number of short-dated bills handled.

The liquidity of the Swiss banks—i.e. the proportion of quick assets to short-dated liabilities—has also largely improved since 1914.

The gross profits earned by the Swiss commercial banks since the outbreak of the war have largely increased, but an important fraction of the increase was absorbed by the considerably higher general expenses and taxes. Nevertheless, the net profits allowed liberal depreciations and a gradual improvement in the average of dividends.

In November, 1912, a banking association under the name "Association des Représentants de la Banque Suisse" was formed in Switzerland, the chief object being the protection of the mutual interests of the banking community.

The commercial banks have also continued the policy of extending their business by the absorption of small local banks and by the opening of new branches.

There is given hereunder a table showing the capital paid up, the year of foundation, the gross profit, and the dividends for 1920, 1919, and 1913 of the Swiss commercial banks:—

Banks	Capital Paid up (Thousands of Francs)			
	Founded	1920	1919	1913
Banque Commerciale de Bâle	1862	60,000	60,000	30,000
Banque Fédérale S.A.	1863	50,000	50,000	36,000
Banque Populaire Suisse	1869	90,173	74,184	66,237
Caisse d'Epargne et de Prêt	1856	8,000	8,000	8,000
Comptoir d'Escompte de Genève	1855	45,000	30,000	15,000
Crédit Suisse	1856	100,000	100,000	75,000
S.A. Leu & Cie	1755	20,000	40,000	36,000
Société de Banque Suisse	1872	120,000	100,000	82,000
Union de Banques Suisses	1912	70,000	60,000	36,000

Banks	Gross Profit (Thousands of Francs)			Dividends, Per Cent		
	1920	1919	1913	1920	1919	1913
Banque Commerciale de Bâle	8,513	8,341	4,524	6	8	7
Banque Fédérale	12,856	10,602	5,596	8	8	7
Banque Populaire Suisse	23,686	21,931	9,899	6	6	5.50
Caisse d'Epargne & Prêt	2,368	1,999	1,169	8	7	8
Comptoir d'Escompte de Genève	19,726	7,570	2,809	10	10	9.50
Crédit Suisse	28,739	24,401	12,912	8	8	8
S. A. Leu & Cie	7,173	9,840	4,542	..	6	7
Soc. de Banque Suisse	38,916	32,357	14,518	9	9	8
Union de Banques Suisses	20,837	17,552	4,769	8	8	7

THE MORTGAGE BANKS

The mortgage banks have suffered heavily since the outbreak of the war, the margin of profit having gradually declined owing to the inactivity of the building trade and to the higher rates of interest charged on redeemable bonds. Most institutions of this character have had to reduce their rates of dividend. Several of these institutions were heavily engaged abroad and suffered to a considerable extent from the depreciation of foreign exchanges.

THE TRUST BANKS

This same remark applies to the trust banks, most of which held securities and cash advances in foreign countries. The sensational declines which occurred in the foreign exchanges very often absorbed the total reserves, and the majority of the Swiss trust banks are carrying forward very large debit balances. Previous to the war the shareholders of these institutions were accustomed to receive very satisfactory rates of dividends.

BRITISH BANK IN SWITZERLAND

The only British bank established in Switzerland is Lloyds Bank, which opened its Zurich office in 1919 and its Geneva office in 1920. Another large British bank (Barclays) has established working agreements with important Swiss banks, but has not yet opened offices in Switzerland.

THE FINANCIAL SITUATION

The financial situation of the Swiss Confederation has suffered considerably by reason of the war, and Swiss finances are temporarily not in the healthy state of 1913. Since 1913 the deficit in the budget has grown as follows in millions of francs:—

1913	1914	1915	1916	1917	1918	1919	1920
0.84	23.97	21.76	2.06	44.75	117.49	202.46	179.52

These totals, however, do not include the cost of mobilization, which expenses up to the end of 1920 amounted to some 1,108,383,671 francs. The situation of the Treasury up to the end of 1922 is summarized as follows in the Swiss budget which was presented to the State Council only a few weeks ago:—

	Millions of Francs
(1) Deficit in the ordinary budget, 1914-1920.. . . .	592
(2) Expenses connected with mobilization up to the end of 1920.. . . .	1,108
Total.. . . .	1,700
Yield of war taxes.. . . .	576
Balance to be amortized at end of 1920.. . . .	1,124
(3) Estimated deficit in ordinary budget for 1921.. . . .	130
(4) Deficit incurred by Federal Food office.. . . .	90
Estimated deficit at end of 1921.. . . .	1,344
(5) Estimated deficit in ordinary budget for 1922.. . . .	100
(6) Expenses in connection with unemployment.. . . .	80
Minimum deficit at the end of 1922.. . . .	1,524

In this minimum deficit of 1,524 millions of francs are not included the deficits of the Federal railways, some 92½ million francs at the end of 1920 and estimated at 48·9 millions and 30·3 millions for 1921 and 1922 respectively—which maintain separate accounts though the state is responsible for all liabilities. Thus the total indebtedness of the Confederation amounts to approximately 1,616 million francs.

Now when it is considered: (1) that prior to the war the ordinary budget deficit was only some 5 million francs, as against over a 100 million deficit now; (2) that there were no mobilization expenses then, which now stand at 1,108 millions; (3) that there was no Federal Food office the operations of which have resulted in a deficit of 90 millions; (4) that there were no Federal unemployment funds of 80 millions; and (5) that the railways were about breaking even so far as revenue and expenditure were concerned, it is not difficult to understand the serious preoccupation with which the financial situation at present is viewed at home.

With the Swiss national debt increased from 1½ billions of francs in 1913 to over 4 billion to-day, with the cantonal debts higher by half a billion and now standing at about 1,300 billion francs, and with the municipal debts similarly increased and showing an indebtedness of about the same amount as the cantons, it would appear that the total public indebtedness of Switzerland has surpassed to-day some 7 billion of francs. Of this amount, moreover, with the exception of the Federal railway debt of some 2 billion francs, the greater part is unproductive. For a small country which was neutral throughout the war, and which has a moderate military and no naval expenditure, Switzerland is being called upon to carry a very heavy financial load. What steps then we may inquire, are being taken to meet this changed situation?

It is to be noted in the first place that the Confederation has been confronted with peculiar difficulties owing to the limitations prescribed by the Constitution on its taxing powers. Up to 1915 more than 85 per cent of the total receipts of the Federal Government came from customs duties (as state revenue constitutionally could only be obtained from customs), income on federal property, post, telegraph and telephone services, the powder monopoly (excluding that for blasting purposes), its quota in the yield of the military service exemption law, and certain fixed contributions from the Cantons. But the monetary yield from these sources was always relatively small as the proportion of customs receipts to total revenue clearly shows.

With the piling up of Switzerland's indebtedness there were three ways for the Confederation to counteract—viz., to resort to direct taxation, to increase indirect taxation, and to issue loans. Each of these methods has been employed. A law of

December, 1915, amended the Constitution and authorized the Federal Government to levy a non-recurrent direct tax on income and property, which has yielded something over 100 millions up to the present time. In 1916 and 1917 the war profits tax was introduced to which were subjected the profits made by business enterprises from January 1, 1915, which exceeded the average profits of the two business years completed before July 1, 1914. The total yield of this tax is now over 600 million francs. A Federal stamp duty was also brought into effect in 1917 and has yielded about 20 million francs annually. One-fifth of this is payable to the cantons.

An extraordinary war tax, moreover, came into effect on January 1, 1921, and its proceeds—some 720 million francs thus far—are earmarked for the sinking fund connected with the war debt or i.e. mobilization expenditure. This scale of taxation is progressive, and the total sum due under this tax is distributed over four annual instalments. The next big instalment of redemption will take place in 1922, and will probably yield 400 millions. So much thus far has been attempted in direct taxation.

As regards indirect taxation, the custom duties have been considerably raised by the new tariff which came into effect on July 1st of 1920. This, however, was designed not only for fiscal but for protectionist purposes, and the revenue which the state will derive therefrom is not estimated in the new budget at figures very much higher than those yielded by the old customs regime. For example, over against the customs receipts of 1920 which actually amounted to 98 million francs, those for 1921, with the new tariff operating six months, are estimated at 100,400,000 francs, and those for 1922 at 133,422,000 francs. This rather small increase, though it may appreciably affect the ordinary budget deficit, is gained at the expense of raising the price of foodstuffs and other imports, and is apparently a questionable economic policy. About four-fifths of the deficits in the strictly Federal accounts from 1913 to 1922 (totalling about one billion of francs) are covered by internal loans and treasury bonds. A new internal loan at 5½ per cent, which closed in January, 1922, was a success in so far as, instead of the 100 million francs asked for, not less than 300 millions were subscribed. All the previous loans were also conspicuously well subscribed.

Thus it is seen that Switzerland is trying to put her financial house in order. Her people are lending their money to the state, and at the same time are paying comparatively a high percentage of their annual income in Federal taxation. Perhaps the most discomfiting feature of this financial load to the Swiss themselves is the fact that it has to be borne at a time when a general commercial and industrial crisis is weighing on the country. Moreover, they cannot be forgetful that, before the war, taxation made itself felt very lightly. The writer is disposed to think, however, from his study of Switzerland's financial situation, that once the military items of the budget are wiped out—and the extra war profits tax has already more than halved the indebtedness assumed on mobilization account—and once the State monopoly for the import of foodstuffs is entirely liquidated—a monopoly which has already cost the Confederation some 275 million francs—Switzerland will see restored in a very few years the approximate budgetary equilibrium of pre-war days.

CURRENCY AND METAL COVER

Although the statutory percentage of metal cover to paper currency is fixed at 40, the National Bank has maintained a much higher reserve against paper issues. In 1915 the cover was 70·57 per cent, in 1916 75·6 per cent, in 1917 74·15 per cent, in 1918 58·98 per cent, in 1919 57·00 per cent (these last two years were unusually low), and in 1920 67·16 per cent. Such cover is not all gold, and stood at the end of December 1921 at some 549,521,000 francs in gold with 108,240,000 francs in silver. In 1920 the average value of the notes in circulation amounted to 933,800,000 francs.

EXCHANGE

As has been previously pointed out, the Swiss franc is conspicuously an appreciated currency. Of those countries with which Switzerland trades to any extent, only the dollar of the United States has recently been at premium, and that one very small, on the Swiss Bourse, while at the end of December 1921 even the American dollar depreciated slightly in terms of Swiss money. In fact all the exchanges were quoted in Switzerland at a discount at the close of 1921. Strong then though the position of the Swiss franc is, yet this appreciation of the Swiss currency makes it difficult for Switzerland's export trade to meet the competition of other countries producing and selling in a depreciated money. To set Switzerland's commercial wheels going, an inflation of the currency has been advocated by some industrialists at home. But the remedy would seem to lie not in inflating and weakening the strong currency, but in appreciating and strengthening the less fortunate exchanges. There is given hereunder a table showing the rate of exchange on Switzerland of the principal countries from the date of the Armistice to the end of 1921.

Countries	Par Exchanges		End of Dec., 1921	Nov. 11, 1918, to Dec. 31, 1920.	
	for Swiss Fr.			Highest	Lowest
United States.. . . . \$	1	5.18	5.11½	6.28	4.78
England.. . . . £	1	25.22	21.47½	25.18	19.12
France.. . . . Fr.	100	100.	40.95	92.30	33.
Germany.. . . . M.	100	123.45	2.75	68.40	5.62
Austria.. . . . Kr.	100	105.01	0.19½	37.75	1.40
Italy.. . . . Lir.	100	100	21.68½	77.75	21.15
Holland.. . . . Fl.	100	208.31	187.75	233	191.50
Spain.. . . . Ps.	100	100	76.25	112.75	79.50
Sweden.. . . . Kr.	100	138.89	127	141.75	104.50
Norway.. . . . Kr.	100	138.89	81	137.50	84.50
Denmark.. . . . Kr.	100	138.89	101.75	134	84.40
Belgium.. . . . Fr. B.	100	100	39.20	86.50	35

THE BOURSES

The principal stock exchanges of Switzerland are Basle, Zurich and Geneva, while markets of a more local character exist at Berne, Lausanne, St. Gall, and Neuchâtel.

The Geneva Stock Exchange was created in 1850, the Basle Bourse opened in 1876, and the Zurich Exchange in 1877. Of course private stock exchange transactions took place at a much earlier date. Important Swiss loans (federal, cantonal and municipal), are generally quoted on all three or four leading markets, but the transactions in this category of securities are more numerous in Basle than in the other two places. On the other hand, Zurich is the chief market for foreign stocks bearing an international character, while in Geneva very important transactions, which have increased to a considerable extent since the outbreak of the war, are taking place daily in foreign funds.

The Swiss bourses, with the exception of Geneva and Lausanne, closed their doors at the outbreak of the hostilities. They reopened in 1915 and 1916, and gradually the number and the importance of the daily transactions became again very important. As no restrictions were put on sales from abroad, foreign holders, especially French, German, and British capitalists, who had taken a rather large interest in different categories of Swiss securities prior to the war, sold most of their holdings, in spite of important price concessions, due to the fact that most foreign exchanges rendered such transactions very remunerative. Hence, the important debt estimated at about one and one-quarter million francs prior to the war owed by Switzerland to foreign countries was reduced at least by one-half. At the same time, the bourses absorbed considerable amounts of home securities, among which the nine mobilization loans, aggregating some 930 million francs, rank first. Important industrial and banking

issues also took place, and contributed to a certain extent to vivify Swiss markets. All transactions are still effected on a cash basis, which restricts speculation somewhat. Nevertheless, the shares of a limited number of industrial concerns, which largely benefited by the war, were heavily purchased for speculative account, especially in 1916 and 1917. In some cases, the quotations reached an unprecedented level. But during the last year or two the increasing difficulties prevailing and connected with the problems of the importation of raw materials and of the exports of manufactured goods, have had a depressing influence.

There is given hereunder a percentage survey of the status of the leading securities quoted on the Swiss Bourse since 1913.

INDEX OF THE SWISS EXCHANGES

Nominal Value Millions of Francs	45 Bonds 1243.03 =100%	21 Shares 592.9 =100%	Total 1,835.9 =100%
December, 1913..	90.57	183.00	117.56
July, 1914..	90.85	179.23	116.28
July, 1916..	81.56	165.34	108.62
December, 1916..	81.22	159.51	106.51
December, 1917..	77.61	160.38	104.34
March, 1918..	77.25	166.04	105.92
December, 1918..	75.49	150.07	99.57
December, 1919..	67.02	107.10	79.97
December, 1920..	59.07	76.27	64.63
September, 1921..	73.92	85.84	77.77
December, 1921..	71.26	69.80	70.79

It will be noted from the foregoing that the high-water mark since 1913 was reached in December 1916, which moreover was pretty well maintained till the Armistice. In March 1919 another high level was reached, but afterwards security prices gradually fell off, and in December 1920 they were particularly dull. Improvement was noticed in the succeeding months, and a gradual recuperation was in evidence till September 1921. During the last three months of 1921, however, another slow decline has again been in evidence.

THE MONEY MARKET

Throughout the war up to 1917 the Swiss money market was rather well supplied with loanable funds. For nearly four years, the official discount rate of the Swiss National Bank remained unaltered at 4.50 per cent. Open market rates fell as low as 1 and 1.50 per cent, in the summer months of 1916 and 1917. But in the autumn of 1917 the rates stiffened rapidly. The cost of the mobilization of the Swiss Army for the maintenance of the neutrality of the country absorbed a large part of available funds. Furthermore, large amounts (estimated at more than half a milliard francs) of Swiss securities held abroad began to find their way back to their country of origin. Considerable amounts of industrial, bank and commercial securities (stocks and bonds) were also issued on the Swiss capital market without any foreign assistance.

Finally, the loans granted by Switzerland to the various belligerent countries, of between 600 and 650 millions of francs, proved to be too heavy a burden for the Swiss market, which in normal years was accustomed to the influx of important sums of foreign capital.

On October 3, 1918, the official discount rate was increased to 5.50 per cent; in 1919 the official rate, however, was lowered to 5 per cent at which it remained until the 11th of August of 1921, when it was again lowered to 4 per cent.

The fluctuations in the discount rate on call or short loans has been as follows:—June 1914, 2 $\frac{7}{8}$ per cent; June 1918, 3 $\frac{1}{8}$ per cent; December 1918, 5 $\frac{3}{8}$ per cent; June 1919, 4 $\frac{1}{2}$ per cent; December 1919, 4 $\frac{1}{8}$; December 1920, 4 $\frac{1}{2}$ per cent; and December 23, 1921, 2 $\frac{1}{8}$ per cent.

PART III

Market Reports

In the sections which follow the writer has endeavoured to indicate the principal Swiss import openings. Canadians may not be able to do business in all, but the preliminary data presented will assist manufacturers in forming some concrete idea of the relative importance of the specific markets. The nearness of other countries to Switzerland and Canada's relative geographical disadvantage should not be a discouragement. The United States is doing business with Switzerland in many lines which Canada manufactures, and this should be an incentive to Canadian firms. Export trade will never be obtained by down-hearted inactivity, and the writer is optimistic enough to believe that if a wise determination is permitted to suffuse an enterprising export policy, Canada can make a very considerable impact on Switzerland's import trade and appreciably redress the now Swiss-Canadian unfavourable trade balance.

To sum up, our opportunities in Switzerland lie principally (1) in cereals, prepared foodstuffs, livestock, leather, furs, asbestos and mica, and (2) to a lesser extent in iron and steel sheets and tubes, agricultural implements and machinery, small hardware and tools, stationary and portable engines, varnishes, lumber, wood-pulp, paper, boots and shoes, cotton goods, and tobacco. The writer does not wish the inference to be drawn that in no other commodity can Canada do business, or that in each of these of the second group trade is assured. In the last analysis, price, quality, and accommodation will be the determining factors in building up our export trade with Switzerland, but given these as equal to or better than those offered by our competitors in the Swiss market, the outlook for Canadian export trade with Switzerland is not unattractive but rather encouraging.

(Quantities rather than values are given throughout this section, and "tons" is used in the sense of metric tons, i.e. 2,204 pounds.)

CEREALS AND THEIR PRODUCTS

In the category of cereals and their products, the following examination will show that there appear in the Swiss imports the Canadian products of wheat, oats, barley, beans, peas, oatmeal, and biscuits, while in rye, maize flour, malt, and macaroni no Canadian imports are noticed. The market for cereals, especially wheat and oats, the writer believes, could be advantageously intensified and successful business is assured. The prospects for selling flour are much less important, though a possibility of trade exists. The openings for Canadian oatmeal, quaker oats, biscuits, and malt would not seem relatively important, but a small trade could probably be carried on.

WHEAT

One of our Canadian products which should find a permanent market in Switzerland is wheat. The country does not grow sufficient for its requirements, and importation is consequently necessary. Prior to the war, Russia was the principal supplying country (some 186,000 metric tons in 1913), with the United States a close runner up (150,800 metric tons). In 1915, however, imports from Russia began to dwindle away, and since then that market has offered no wheat to Switzerland. Whereas the United States in 1914 began to increase its quota to Switzerland's total imports of wheat (168,300 metric tons), what trade Canada had established by 1913 (some 80,300 metric tons) was allowed—doubtless through war necessity—to drop off very appreciably (59,900 metric tons in 1914, and 20 tons in 1915), and in 1916, when the United States exports of wheat to Switzerland (some 540,400 tons) totalled over three times and nearly four times her exports of 1914, Canadian exports were *nil*. By 1919, the United

States, though still the principal supplier with 210,600 tons, did not have the market to herself, as the Argentine with her hard red winter 2 had become a supplying factor of no small importance (105,200 tons). Canada's contribution during 1919 was also *nil*, but in 1920 our wheat was again being purchased to some extent (13,200 tons), the status of the United States (211,400 tons) and Argentina (103,500 tons) remaining as in the preceding year. With the complete returns for 1921 failing, it is not possible to state the Canadian exports of wheat to Switzerland for last year, but information to hand would indicate that again last year our exports were not conspicuously large.

Wheat, as in most other countries, was a Swiss Government monopoly throughout the war, but unlike most other countries at present, the monopoly regime still continues in Switzerland and all wheat imported is still controlled by the Federal trade office at Berne. It cannot be stated just when free trade in wheat will again be allowed, but with most other commodities removed from Government control, it would seem that the end of the wheat monopoly is also not far distant. When the writer was in Switzerland a few months ago, he took up the question of Canada supplying wheat with the Federal authorities, and the attention of our grain exporters has already been called to the importance of this market, hedged as it is at present. An order was placed in Canada for some 30,000 quarters not long ago with a Montreal firm, and the writer has been assured that so long as this control lasts our offers will be favourably considered.

A new factor arose this last fall in the Swiss wheat situation, when the Swiss Government contracted with Roumania to take 75,000 tons of the 1921 crop and a similar quantity of the crop of 1922. With Switzerland's exports falling off, a credit arrangement was arrived at in the interests of Swiss exporters of manufactured goods and Roumanian wheat exporters. However, even with this amount contracted for, Switzerland consumes very much more imported wheat than this amount to be derived from Roumania, and as she is not pushing wheat cultivation at home, Canadians should be alive even this ensuing year to the opportunities of the Swiss wheat market. In pre-war days Roumania supplied very little wheat to Switzerland; in 1913, some 50,200 metric tons—and Roumania's assured trade at present in this commodity does not necessarily mean a permanent business. Of course there are other competitors besides Roumania, principally now the United States and Argentina, but once wheat is allowed free importation, no effort should be lost to establish ourselves immovably in this market. It may be pointed out that the writer understands from conversations he had with the Food Monopoly Bureau and with former private importers, that our Manitoba 2 hard wheat is the most adaptable to the needs of the Swiss market. Criticism was made of the Argentine wheat, which it was intimated had frequently been mixed with extraneous substances, of small kernels, and lacking in its glutinous quality.

To sum up, then, it may be stated that Switzerland produces some 100,000 tons of wheat normally, imports normally nearly four times that amount, and that up to the present Canada's largest contribution has been about 80,000 tons in 1913. It is reasonable therefore to claim that the pre-war record can be at least maintained and, as our wheat, especially our Manitoba 2, is highly appreciated, to count on a larger market in Switzerland if sufficient effort is put forth by our exporters to get this larger trade.

STATISTICS OF CEREALS IMPORTED

The table which follows gives the total quantity of wheat, rye, oats, barley and maize imported into Switzerland during the years 1913, 1919 and 1920:—

	1913	1919	1920
	(In Thousands of Metric Tons)		
Wheat.. . . .	529	316	329
Rye.. . . .	19	41	4
Oats.. . . .	177	89	52
Barley.. . . .	36	19	10
Maize.. . . .	121	134	24

OATS

It is seen from the foregoing table that oats come after wheat as the second leading imported cereal. At the present time the Argentine, the United States, and Czecho-Slovakia are by far the largest exporters of oats to Switzerland. In 1913 the largest supplier was Germany, followed by the Argentine, Russia, and the United States. In these imports for 1913, moreover, which were three times more in quantity than in 1920, Canada was a smaller factor and contributed some 1,169 tons of oats. Since then, however, Canadian trade in oats with Switzerland has disappeared. In a conversation which the writer had with the Director of the Union des Syndicate Agricoles at Lausanne, the opportunity which Canada had of getting a part of the oat business of Switzerland was emphasized. The Director had in his laboratory samples of Canadian Western oats No. 2 and Manitoba feed oats No. 2, and he intimated that a profitable connection could be maintained especially in these grades. These agricultural syndicates of Switzerland are important organizations for the handling of such products, and the writer would call the attention of Canadian exporters to this channel of business inlet.

BARLEY AND OTHER CEREALS

In the Swiss barley trade Canada did something in 1920, our exports to Switzerland amounting to about 20 tons. This would seem to be but a beginning in this business, as pre-war statistics show no exports of barley to Switzerland from Canada. During 1920 some 20 tons of dried beans, 116 tons of dried peas, and some 22 tons of other cereals, including in this amount small quantities of oatmeal, were also exported to Switzerland from Canada. In 1913 the exports of oatmeal from Canada to Switzerland totalled 94 tons.

THE FLOUR MARKET

The flour market of Switzerland would seem to have a comparatively low claim on Canadian millers. The local predilection is generally to buy wheat and for the important milling industry at home to grind the grain. Of course flour,—and in some years considerable amounts of flour,—is imported, but the market, so far as the writer could judge, is not particularly attractive and steady. During the war a strict Government control on the flour trade was maintained and a standardized flour of dark quality was produced (bolting percentage 91 per cent). It was only in September 1920 that the bolting percentage was reduced to 82 per cent, to be followed in October 1920 by a further reduction to 80 per cent, which is normally still a little higher than the type of flour employed by the bakeries. In 1913, 38,132 tons of flour were imported into Switzerland, Germany being responsible for 33,000 tons of this amount. France and Italy contributed but small additional quantities. In 1920 the flour imports dropped from 30,240 tons of the preceding year to but 2,725 tons, indicating that the native industry was pretty well looking after national requirements. It is instructive to notice, however, that what flour was purchased in 1920 came almost exclusively from the United States. So far as the writer knows, no Canadian flour has during the last few years been sold in Switzerland, and it may be that a popularizing campaign would meet with certain compensating results, even though the market cannot be considered at present as very promising.

MALT

The Swiss malt market deserves consideration inasmuch as malt is the raw material of the important Swiss beer industry. Some 50,930 tons were imported in 1913, the bulk of which came from Austria-Hungary, although France and Germany contributed smaller quantities. In 1920, Czecho-Slovakia and France were the largest suppliers, although a new source is noticed in the United States. The total

imports for 1920 were about 16,000 tons, and the United States share of this trade was 138 tons. The malt market therefore seems to be commanding the interest of American exporters.

BISCUITS AND MACARONI

Biscuit imports are very small as an excellent quality is made at home, although English, French, and Belgian biscuits can be purchased in the best grocery shops. In 1913, 450 pounds of Canadian biscuits were imported. The imports of macaroni are mostly of Italian origin, but even these are not large, some 280 tons in 1913 and some 204 tons in 1920. The native industry produces normally about 200 times as much as is imported or some 40,000 tons. This in itself is sufficient evidence of the Swiss liking for these "pasta" dishes.

FRUITS AND VEGETABLES

In addition to the large quantities of fruit grown at home, Switzerland draws to some appreciable extent on Italian and French sources. Apples, apricots and pears all arrive from these countries. The only opening for fresh fruit in Switzerland from Canada would appear to be for apples, and if the quality and the packing methods of these were advertised, the writer was informed some profitable business could probably be done. Italian and French apples, though of good eating quality, do not present the appearance nor do they possess the flavour of the Canadian fruit, and our winter apples would undoubtedly be appreciated for table use. It is to be kept in mind that the Swiss, like most Europeans, are exceptionally fond of fresh fruit, and fruit is served as a regular course in most households, at both lunch and dinner. Provided our apples can be laid down at a convenient price, a seasonable trade should be built up. In 1913 about 220 pounds of apples from Canada figure in the Swiss trade returns. The United States sent forward 11 tons of fresh fruit in 1913 to Switzerland.

In dried fruits there seems no reason why Canada should not export fairly large quantities to Switzerland. In 1913 the total imports of dried fruits amounted to some 3,579 tons, and almost half of this trade was obtained by the United States, Austria-Hungary being the next best competitor. In 1920 only 936 tons were imported, and Jugo-Slavia was responsible for 550 tons of this amount. Canada appears with something over 8 hundredweight, whereas the United States sent 276 tons. The best grocery stores in the large cities feature these dried fruits at Christmas time and throughout the winter months, and the writer was informed that evenly packed and choice dried fruits, especially prunes, would sell to a considerable clientele. The importance of developing our export trade in these lines has perhaps been in the past somewhat neglected and every opening should be availed of to increase this export, especially as in Canada there is such an abundance of the raw material which, with proper care being given to drying, packing and shipment, lends itself so admirably to the extension of this trade. This trade must necessarily be restricted in Switzerland, but if Jugo-Slavia and the United States can sell dried fruits in Switzerland, Canada should be able to increase her sales of these products.

The Swiss trade in tinned vegetables is not very large. Altogether in 1913 some 321 tons were imported. France supplied 188 tons of this amount, Germany contributed some 90 tons, Italy some 83 tons, the United States some 76 tons, Belgium some 53 tons, and England some 28 tons. In 1920 the total imports tallied 641 tons with Italy supplying about one-third, France about one-fourth and Belgium about one-sixth of the purchases. The United States exports of tinned vegetables to Switzerland for 1920 amounted to some 42 tons. The French and the Italian peas are the largest sellers but smaller quantities, especially of stringed beans and tomatoes, are noticed in the grocery shops. Canned pork and beans can be had, but the demand is not insistent. Our tinned peas and tomatoes as packed at home cover the most important openings of this market so far as Canada is concerned.

THE COLONIAL PRODUCTS

Of the colonial products which Switzerland imports, those of most interest to Canadian exporters are tea, syrups, sugar and honey. Now although tea is not by any means as common a drink in Switzerland as is coffee, yet owing largely to the number of English and American tourists constantly visiting the country, there are considerable quantities of tea consumed. In 1913 some 431 tons of bulk tea were imported and some 96 tons of package tea. The figures for 1920 are 513 tons and 83 tons respectively. It is only package tea which here concerns us. During the writer's stay in Switzerland, he made it a point to visit the principal grocery shops in each city and ascertain the variety of goods being sold, the countries from which such goods were derived, and the way such goods were packed. In this connection he was surprised to see the large amount of tastefully arranged window spacing given over to the display of package tea. In Zurich, Basle, Geneva, and Lausanne this was particularly noticeable. The tea on sale was generally of English origin and was generally packed in attractive-looking packages of $\frac{1}{4}$, $\frac{1}{2}$ and 1 pound. Several of the best English trade marks were represented. Here is a trade where the writer is told the English weights are quite saleable. Canada has sold very small quantities of tea to Switzerland, but a further effort might be put forth to get a part of the package tea trade which is offering.

A bottle of the principal syrup which Canada has to sell, viz. maple syrup, was purchased by the writer in the largest grocery store in Lausanne. In an interview with the director of this firm, the writer was informed that this maple syrup was purchased by him from an import house at Marseilles. The opinion was expressed that though the opening for this product could not be considered as large, yet he always stocked a certain quantity, especially as American residents and tourists often asked for it, and he believed a small direct trade could be established.

Sugar is one food product, however, which Canada should be able to supply in increasing quantities to Switzerland. The imported sugar is divided into three categories: lump sugar, block sugar, and granular sugar. The most important category, as far as actual quantities are concerned, is the first, which is largely used not only for ordinary cooking purposes but also in the chocolate and condensed milk industry. This sugar is not refined to the same extent as the table sugar and comes partially in grains and partially in small lumps of uneven size. There were 81,189 tons of this quality imported in 1913, and 125,163 tons imported in 1920. In the last pre-war year Austria supplied 58,637 tons of this amount, and Germany 19,287 tons. However, the sources of supply have since been changed. The Dutch East Indies were responsible for 61,939 tons in 1920, the United States for 28,809 tons, Holland for 25,161 tons, and Czecho-Slovakia for 6,727 tons. Canada also contributed 74 tons to the total amount imported. With the United States supplying 23 per cent of the imports for 1920, with Canada's introduction already made, and with the Swiss industries just alluded to using large quantities of this quality of sugar—industries which rank among the first of Switzerland—we would be well advised to cater to this particular market.

In addition to the foregoing, 19,758 tons of block sugar and 16,313 tons of fine sugar were imported in 1913, and 982 tons of block sugar and 434 tons of fine sugar in 1920. Austria and France were the principal supplying agents in 1913, while Czecho-Slovakia and France monopolized this smaller market in 1920. It will be seen then that Switzerland normally imports nearly 120,000 tons of sugar altogether, and that the need is not only domestic but industrial.

Bees' honey is another grocery specialty which is constantly being sold in Switzerland. Breakfast there is not the meal it is in Canada, and if a Swiss takes anything besides his coffee and milk, he will gradually call for marmalade or honey. Honey is also always served at the hotels for breakfast, and hence there is not an inconsiderable demand. Apart from the honey which is produced locally, some 600 tons were imported in 1913, principally from Chile, Central America, and Italy. In 1920 the imports of

honey amounted to 673 tons, to which France, the United States, and Chile chiefly contributed. In fact, some 157 tons came forward from the United States. Either a dark or a light honey—preferably the latter—and suitably bottled in 1-pound or 2-pound containers, would seem best to serve the needs of the buying public, while larger honey receptacles would be taken by the hotels.

MEATS, FISH, ETC.

About 500 tons of smoked hams were imported into Switzerland in 1913, Austria supplying almost half of this quantity, and with much smaller contributions from the United States and Germany. In 1920, out of the 358 tons imported, the United States sold to Switzerland 255 tons. More bacon than ham is, however, imported in Switzerland, and the United States sold 513 tons out of the total of 871 tons bought in 1913, while in 1920 Danish bacon was more in evidence, some 582 tons coming forward from this source out of a total importation of 1,270 tons. The United States sent 418 tons in 1920, and Jugo-Slavia 250 tons. Canada sold only 800 pounds of bacon to Switzerland in 1913, and no imports are recorded therefrom in 1920. The Swiss lard trade so far as imports are concerned is done principally with the United States, which exported 6,141 tons in 1920 out of 6,441 tons imported. About one-third as much lard was imported in 1913, but even then the United States held the trade. This product comes forward in barrels of 160 kilogrammes, and in firkins of 50 and 25 kilogrammes, or in small pails of about 10 pounds. An effort should be made by Canadian exporters to get a share of this business.

One other item may be mentioned here, viz. beef suet, which was imported to the amount of 1,786 tons in 1913 and to the amount of 1,005 tons in 1920. Whereas these supplies were derived from France and the United States principally in 1913, in 1920 the Argentine shipped about 50 per cent of the imported product, while the United States supplied 393 tons and Canada 12 tons. In 1913 no imports are recorded from Canada.

Apart from frozen meat, the imports of which in 1920 were only 319 tons, with the United States sending 228 tons, and in 1913 some 2,403 tons—(the Argentine being responsible for 1,784 tons, Australia for 418 tons, the other countries of South America for 176 tons)—the only other meats imported which are of interest to Canada are the conserved products put up in the ordinary size tin of Canadian and United States consumption. Some 397 tons were imported in 1913 principally from South America and Germany, but in 1920, 1,333 tons were imported, of which the Argentine supplied 512 tons, Uruguay and Paraguay 203 tons, the United States 394 tons, and Canada 123 tons. In several of the leading Swiss shops handling this line of goods, the writer saw American meats prominently displayed, and although he also saw Canadian tinned meats yet their labelling and presentation was not nearly as attractive as the tins from the United States. Moreover, United States meats can be purchased in smaller tins than the Canadian product. It would seem that Canadian exporters might considerably improve the outside appearance of the tins, making them more attractive to the purchaser. Of course fresh meat is preferred in Switzerland, but there is always a certain demand for the tinned meats. There are thousands of Swiss who go climbing every week-end with only the alpenstock and rucksack, and a small can of tinned meat is always a ready provender not only for a day's trip of this kind but also for a longer holiday excursion. This market deserves more attention from Canadians.

CURED AND PRESERVED FISH

The dried and cured fish trade of Switzerland is not as yet important. The writer uses the phrase "as yet" advisedly, as he believes from conversations he had in Switzerland that if our Canadian cod, for example, of prime quality, were popularized to some extent, our sales could be considerably increased. As one big firm put it—"When the housewife comes to my store for fish on a Friday or some

other day, it never occurs to her to ask for dried cod principally because she does not know what it is, and secondly because she does not know how to prepare and cook the fish." This merchant stated he often had codfish in his store, but generally failed to dispose of it when it was at its best. He suggested that if an enterprising Canadian firm of exporters would issue a small pamphlet in French on the methods of serving codfish he believed that its distribution from stores such as his own would undoubtedly in time create a demand for our Canadian cod. It is to be remembered, on the other hand, that the Swiss is for the greater part a Protestant nation and there is not the religious motive for eating fish there is in the Mediterranean countries. The kind of codfish mostly in demand at present is the white cured fish, well split and with a clean nape and of medium size.

The total quantity of dried, salted, pickled and smoked fish imported into Switzerland amounted to some 1,308 tons in 1920, and to 1,047 tons in 1913. Germany, Norway, Italy, France, and Spain were the largest suppliers in the last pre-war year, while in 1920, Holland, Denmark and France were the chief sources of origin. Canadian fish figure in these amounts to the extent of slightly more than one ton in 1913 and to the extent of 30 tons in 1920. Although all kinds of conserved fish in bulk are included in this category, dried fish is the principal product referred to with much smaller quantities of chiefly smoked herring.

TINNED FISH

The most frequently asked for tinned fish in Switzerland are sardines, salmon, and tunny fish. The grouped imports of all small boxed fish amounted to 923 tons in 1913 and to 2,275 tons in 1920. France and Portugal are the largest suppliers and contributed some 987 tons and 387 tons respectively in 1920. These imports consist almost exclusively of sardines. Norway's portion of this trade, also in sardines, was for 1920 some 219 tons. France and Italy also supplied a small amount of tinned fish.

As to the exports of tinned fish to Switzerland from the United States and Canada, these amounted to 351 tons and 119 tons respectively and were made up almost entirely of Pacific Coast salmon. The tall 1-lb. tins bearing United States or Canadian trade marks are found in every large grocery shop. True the consumption is not large, but a fair amount is always in demand, particularly the red and pink varieties. Importers dealing in these lines were not very optimistic as to a much larger trade, and especially expressed the opinion that its relatively high price made it difficult to push this trade. Fresh fish is preferred; and it is difficult to persuade the Swiss cook, for example, to forgo the lovely Swiss trout when available and to buy tinned fish at a cost which, though a saving in actual expenditure, does not offer a sufficient margin of inducement (especially in the well-to-do families) to purchase the imported product. Inquiries for Canadian salmon were, however, received by the writer, and we should at least try to secure a little more of this business than we now have.

TINNED PRESERVES

The only other important tinned food product which concerns us here are preserves. It should be pointed out that the Swiss jam and preserve industry produces not only for the home trade but exports considerable quantities to the world's principal markets. Notwithstanding this, 470 tons of different kinds of preserved fruits and jams were imported in 1920 and 468 tons in 1913. England and the United States between them take care of a considerable part of this trade, with imports also from France and Italy among other countries. Just as there is a limited clientele which always prefer, for example, Cross and Blackwell products, so there is also a number of people who ask for Californian peaches and other American fruits in syrup. The Swiss specialty is the thick jam put up attractively in small tins and bottles, and by

far the largest consumption consists of this type. Fruits in syrup are not generally called for, and it would seem difficult to create a large demand for this product. In the small preserved fruit trade which is done, however, Canada shared with 14 tons in 1913 and with 8 tons in 1920. Home production, which is well protected by the customs tariff, makes foreign competition difficult.

CHEESE

Despite the fact that Switzerland is pronouncedly a cheese-exporting country, yet a considerable quantity was imported in 1913 as well as in 1920. In the first-named year, for example, 3,521 tons were purchased abroad, while in 1920 some 1,982 tons were imported. In the soft cheeses, France and Italy pretty well divided the trade with a small quantity arriving from Germany in pre-war days. In the hard cheeses for grating purposes and for table use, France and Italy also do a fair amount of business, but inasmuch as Holland is exporting cheese to Switzerland and has latterly increased her exports thereto and especially as Switzerland is now drawing on Denmark for cheese supplies which were passed over before the war (some 208 tons were imported in 1920) it would seem that Canadian cheese if well introduced, would find an increasing clientele.

SUMMARY OF FOOD PRODUCTS

The following Canadian food products have been actually sold in Switzerland either in 1913 or in 1920 or in both years: wheat, oats, barley, peas, oatmeal, biscuits, apples, dried fruit, tinned vegetables, sugar, bacon, beef suet, tinned meats, dried fish, tinned salmon and tinned fruits. Of these products the writer believes the most important openings for Canada lie in wheat, oats and sugar, although each of the other trades deserves consideration, as do also the markets for malt, tea, cheese, maple syrup, bees' honey and lard.

HORSES, LIVESTOCK, ETC.

Owing to the decrease in Switzerland's livestock during the war, there is offering at present a more important market in Switzerland for Canadian cattle than formerly. This was the opinion expressed to the writer by one of the most important Swiss firms carrying on an import business in this line, and which has already purchased Canadian cattle and livestock. The most favourable openings for Canada are for beef cattle and sheep. In 1920, Switzerland imported 7,383 head of cattle for slaughtering purposes, and 2,292 non-milch cows. In these totals Canada appeared with 1,252 and 969 head respectively, topping the last category, and being preceded by Denmark in the first which supplied 5,992 head for slaughtering. In 1913 the importation was 12,280 and 36,699 head, but Canadian cattle do not appear and France was the principal source of supply. Some 1,596 bulls for slaughtering were imported in 1920 and 5,245 bulls in 1913. Canada contributed 172 and Denmark 1,415 in 1920, whereas France again practically met the 1913 requirements.

The number of sheep imported in 1920 amounted to 1,933, Germany sending 1,509 head and Canada 385. In 1913 the imported sheep were 113,257, France, Italy, and Austria being the principal sources of supply. That the attraction of Swiss importers is being turned to Canada is evident from the foregoing, and our cattle exporters would do well to keep this point in mind.

Out of the 10,616 horses imported in 1920, France was responsible for 4,716, England for 2,169, Holland for 2,127, Denmark for 203, the United States for 120, and Canada for 19. Some 6,996 horses were imported in 1913, France and Germany doing the largest share of the business and with no arrivals from Canada. Here again a small but encouraging beginning has been made.

TOBACCO

A very important tobacco industry has developed in Switzerland. In addition to purely Swiss companies, several of the most important Egyptian firms have opened up factories in the country, and the British American Tobacco Company recently started a cigarette factory at Geneva. Altogether in 1920 some 13,156 tons of leaf tobacco were imported, and of this amount 6,249 tons arrived from the United States, which was far the largest supplier. Of course the head offices of the foreign tobacco firms working in Switzerland are not situated in Switzerland, but the industry has taken on such proportions that the writer believes it opportune to point out to our tobacco growers this possible outlet for Canadian tobacco. In 1913 some 8,378 tons only of tobacco leaf were imported, and that year the United States exports were approximately 5,000 tons. The increasing import of tobacco from pre-war days is therefore quite striking.

SEEDS AND OILCAKE

In the category of seeds there is imported into Switzerland one product, viz., grass and clover seed, which is of interest to Canada inasmuch as Canada is already exporting this to Switzerland. In 1920 some 1,549 tons were imported, the largest quantities being procured from France, Denmark, Czecho-Slovakia, and Italy, but in the importation the United States figured with 80 tons and Canada with 8 tons. In 1913, 934 tons were imported, France contributing more than 50 per cent and preceding Germany which was the second supplier. This trade which Canada has started is undoubtedly capable of expansion.

Nor should Switzerland's need of oilcake be overlooked. As a cattle food it is considerably used in the country, and some 24,459 tons were imported in 1920 as against practically the same amount in 1913. France did the bulk of the trade in 1913, although about 8,000 tons were imported from Germany, 5,500 tons from Italy, and 289 tons from the United States. In 1920 the United States shipped practically 4,000 tons of oilcake to Switzerland, although the contributions of Italy and Belgium were about 8,750 and 4,800 tons respectively. As this market for the imported product is more or less constant and absorbs approximately 25,000 tons yearly, Canadian exporters will probably be interested in the market.

HIDES AND LEATHER

The Swiss tanning industry now draws on the Argentine and France for its principal supplies of hides, these republics exporting to Switzerland in 1920, 157 tons and 102 tons respectively. Only 18 tons came forward from the United States. In 1913 the total imports were 2,185 tons, and Italy, France, and the Argentine were the chief sources of supply. The United States in that year shipped 60 tons. No exports are recorded from Canada.

The leather market undoubtedly should hold out attractions to our Canadian tanners. Switzerland imports considerable quantities of leather, and as the United States is doing a very fair share of the present trade, Canadian exporters should find themselves in a position to compete. The writer spent a morning in the works of the most important boot and shoe makers of Switzerland, a firm which is carrying on a large export business, and he was informed that Canada should have a favourable opening in Switzerland for the upper and sole leather it produces. This firm expressed the opinion that the assortment of tanned sole leather which comes forward from the United States was not always uniformly of good quality; and if Canada would undertake to deliver at competitive prices a first-grade sole leather and of uniform quality throughout the parcel, permanent business would result. As regards upper leathers, the manager of the firm intimated that in "patents" Canada too had a splendid opportunity. Too much of the patent leather which had recently been arriving in Switzerland was of an inferior variety, and in fact this large firm was

thinking of sending its American buyer to visit some of our Canadian firms. The reputation of Canadian "patents" had reached them, the director stated, through England, and he was anxious to try them out in their own factory. In glazed kids, boxcalf, and chrome tanned sides, there was also reported an opening for Canada.

The imports of sole leather in 1913 totalled 3,017 tons, and in 1920, 682 tons. The former is about the normal quantity required. Germany in pre-war days especially catered for this trade and sent 1,223 tons in 1913. The next largest supplier was the United States with 807 tons, while smaller orders were placed principally in Austria, France, and England. In 1920 the United States shipped over 50 per cent of the imports, while France sent over another 25 per cent. Belgium supplied 76 tons and England 5. From Canada in 1920 were purchased about two tons of sole leather.

It is to be kept in mind in any examination of the Swiss sole leather market, that both the heavy and lighter grades are required. In that part of the boot and shoe industry which is devoted to export, the lighter sole leathers are employed, while an important part of the sole leather used in manufacturing for domestic consumption must be of a heavy calibre, as Swiss people are very fond of walking and climbing and light soles will not stand up against the use to which they are put. Of course for street and house wear a less heavy sole is required.

With regard to upper leathers, some 1,367 tons were imported in 1913, and some 675 tons in 1920. Included in these amounts are principally boxcalf, black glazed kid, patents, and sheepskins, in the order named. The United States was the largest individual supplier in 1920, about 300 tons being derived from this source. Germany followed with 213 tons, after which came France with 32 tons and Italy with 16 tons. Some 3½ tons of these upper leather imports came from Canada. In the last pre-war year, Germany supplied over 70 per cent of the total imported requirements, while Great Britain and the United States ranked second and third, with still smaller quantities principally from France.

In boxcalf Germany has been the chief seller, while in black glazed kids and "patents", France, Great Britain, and the United States are doing the bulk of the business. English "patents" are preferred to those of American make, French black glazed kid to the United States product, while in coloured glazed kids the French are supreme.

Of the five grades of upper leathers into which American manufactures classify their leather, viz., H, HM, ML, LM, the Swiss market takes principally H, with decreasing quantities of HM and M and with very little L and LM grades.

Other imports of leather consist: (1) of saddlery and harness leather mostly for military purposes and totalling 37 tons in 1920 supplied principally by Germany, Great Britain, and France. Some 142 tons of this kind of leather were imported in 1913, Germany and Belgium taking the largest number of orders. (2) All other kinds of leather, e.g., travelling bag leather and leather for belting and furniture covering, etc. This importation totalled 220 tons in 1920, France supplying 78 tons, Germany 51 tons, Great Britain 42 tons, and the United States 24 tons. Germany supplied 45 per cent and France 30 per cent of this pre-war trade, when in 1913 some 371 tons in all were imported. Smaller contribution came forward from Great Britain and the United States.

BOOTS AND SHOES

Despite the fact that Switzerland exports large quantities of boots and shoes valued at nearly 10 million dollars in 1920, yet there are imported a fairly large number of pairs from abroad, especially from the United States and France. Of the 548 tons purchased in foreign countries in 1920, France made 203 tons—to a large extent fancy shoes—the United States 190 tons, Great Britain 60 tons, and Germany 46 tons. In 1913 there were some 825 tons imported of which Germany manufactured 615 tons, France 59 tons, Great Britain 50 tons, and the United States 43 tons. It is thus seen that whereas Germany once did the greatest part of this trade, she is now

preceded by France, the United States, and Great Britain. In fact the tendency has been of late to buy more American shoes and as a certain quantity will continue to be imported, it would seem that Canadian shoemakers should cultivate this market. When in Geneva the writer saw Canadian children's shoes, and was informed that there were none better on the market. Our total exports of all shoes to Switzerland in 1920 amounted, however, to only one ton.

What is particularly wanted in Switzerland is a good quality welted shoe, and it is only in the finer class of footwear that Canadian manufacturers can expect to compete. The type in demand both for men and women is the well-known Continental shape of shoe without freakish toes or heels. The Walk Over Shoe Company run a large store in Geneva and sell many of the popular American shapes, but this special trade is largely with the passing American tourists. The Swiss themselves claim that the elongated vamp is uncomfortable for walking and does not allow the foot to go forward in the shoe, for example, in walking down hill. It would be wiser therefore to cater to the Swiss taste than to try to impose our taste on the purchaser.



One particular class of boot deserves attention in passing, viz., the sport boots worn in this paradise of sport. For walking, alpine climbing, skating and skiing, a substantial and comfortable sport boot, standing hard and continuous wear, is needed. For mountaineering various kinds of sole nailings and cleatings are employed as represented in the accompanying illustration. Skating boots are made locally on the model of the skating boots of Sweden or reinforced with ankle straps. Ski-boots are made with rough rubber soles or with special ski-nails. There is in short a good and constant market for these various kinds of sport shoes.

THE LUMBER MARKET

As was pointed out in an earlier part of this report, a little more than a fifth of the total area of Switzerland is estimated as being covered with forests, but as Switzerland itself is a small country the area under forests is not actually large and extends to some 2,299,980 acres in all. This forest area was at one time much greater than

at present. The valleys as well as the mountain slopes to a height of 1,100 to 1,300 metres were covered with a mixed forest of coniferous and deciduous trees, but exportation by means of the Swiss rivers and the demand for wider areas of arable and pasture land resulted in widespread deforestation, and Switzerland today is numbered among the countries poor in wood. When the evil results of the wasteful forest policy became evident, the Cantons began to take active measures to protect the Swiss forests, and in 1874 the care of the forests was put in the hand of the Federal Government. Since that time considerable attention has been given to reforestation and the forest area is increasing. In the forty-two years from 1872 to 1914, 32,115 acres were reforested, while in 1914 some 13,181,479 coniferous trees and 5,055,357 deciduous trees were planted.

The average lumber cut in Switzerland during the years 1907 to 1910 amounted to 2,700,000 cubic metres. In 1914 the production was slightly higher at 2,830,325 cubic metres, while the following war years saw a considerable advance and the cut reached over 4,000,000 cubic metres in 1916 and 1917. This extra cutting may be attributed chiefly to three reasons: (1) the scarcity of coal and the greater domestic demand for wood; (2) the increased industrial demand for wood on the Swiss market to replace the wood-pulp and paper formerly imported; and (3) the expanding foreign market. From an importer of lumber primarily before the war, Switzerland became primarily an exporter during the war years, and whereas the excess of lumber imports over exports in 1913 (for example) was 675,000 cubic metres, the excess of exports over imports reached 520,000 cubic metres in 1916. These war exports, however, may be considered as quite abnormal and were due largely to the insistent demand from France and Italy for boards of a resinous nature, and though continued on in 1918 by virtue of a trade agreement with the Allies, this high level has been latterly very appreciably reduced, and the year 1920 saw a much lower exportation than in the immediately preceding year.

The future Swiss demand for lumber is likely to be at least on a pre-war basis, and very probably on a larger scale for the next few years even though the emergency of war reversed Switzerland's commercial policy as regards the buying and selling of lumber. As cutting was then carried on at an abnormal rate, the forest resources were necessarily somewhat depleted, and Switzerland will therefore from now on, it is expected, cut less wood in order to allow her forests to recuperate and in order to follow out that policy of conservation which was consistently pursued from 1872 to 1914.

PRINCIPAL LUMBER IMPORTS

The table which follows gives in metric tons the principal lumber imports and exports for 1913 and 1920:

	Importation		Exportation	
	1913	1920	1913	1920
Lumber for construction purposes..	109,869	29,633	33,433	18,427
Oak boards..	15,609	10,990	199	430
Boards of resinous trees..	89,756	60,227	12,718	161,864
Boards of leafy trees..	11,632	9,019	1,585	1,687

The bulk of the lumber imported in pre-war days consisted largely of logs in the round, rough hewn timbers, round poles and wood in the rough for general construction purposes. For house construction in Switzerland beams, rafters, scantlings, etc., are made of various sizes to suit particular purposes. Many of these are in the round form, and in addition to the native spruce and silver fir, German, Austrian, and French spruce and fir are mostly employed. These beams generally run in the following sizes: 18 by 18 cm., 18 by 20 cm., 20 by 20 cm., 20 by 22 cm., 22 by 22 cm., 20 by 24 cm., 22 by 24 cm., 24 by 24 cm., and from 4 metres, 4½, 5, 5½ to 6 metres in length. Of course there are also smaller rafters such as 12 by 12 cm. up to 14 by 16 cm., and even still smaller sizes. It may be further pointed out that these beams are

either fully square, straight and well trimmed or else rough hewn, somewhat tapered, with waney edges on two or more corners and with more or less knots and defects.

An examination of Swiss trade statistics shows that in 1913, Germany and Austria together controlled the import trade in this constructional lumber although France participated especially in the rough-hewn beam trade, while in the square beam business Japan was a noted contributor. Imports from the United States were very small and consisted mostly of yellow pine logs of large dimensions. The greater part of this trade is in the rough-hewn lumber. In 1920 and 1921 the main sources of supply were also Germany, France, and Austria, in the order named. The imports for the first three-quarters of 1921 (36,900 tons) were much heavier than the similar imports for the whole year of 1920 (29,900 tons). Owing to the nearness of Germany, Austria, and France, Canadian competition would seem in this line to be difficult, although it is to be noted that the United States is doing a certain amount of trade as did also Japan in 1913.

SAWED LUMBER

The most important class of lumber imported into Switzerland is sawed lumber (planks and boards) of various kinds and sizes, and includes board lumber for house and factory building, for furniture, for rolling stock, such as freight and passenger coaches, for bridge construction, and for a great variety of miscellaneous purposes. To supplement the native cut lumber used in this connection there were imported in 1913 some 117,000 tons, some 80,200 tons in 1920, and 54,500 tons in 1921 (January-September).

The principal kinds of sawn lumber imported are (1) the resinous woods as fir, pine and spruce, (2) oak, and (3) lumber as it is called of the "leafy trees" or hardwood.

By far the largest place in these imports was taken by the resinous woods of Austria in 1913, which with her spruce and fir was the chief source of supply in that year, and two-thirds of the total resinous imports were derived from that country. Now although the old Austria has lost much of her former forest wealth, it is to be noted that the trend of trade these last two years shows that Austria and Czecho-Slovakia are to-day the second largest suppliers, being preceded only by Germany.

The almost complete absence of Scandinavian imports is noticeable. The United States has been represented in this trade for several years, and in 1913 with 13,358 tons ranked next to Austria among the countries of origin, and did half as much again more business in that year than did the nearby neighbour or Germany. In 1920 the United States took fourth place in these imports with 1,406 tons, and in the January-September period of 1921, American imports (1,516 tons) were slightly over 100 tons higher than for the whole of the preceding year. This American long leaf yellow lumber is mostly pitch pine in boards and planks, and the business which has been built up bespeaks the attention of Canadian exporters. It cannot be forgotten, of course, that carriage costs are very much against the buying of transatlantic lumber in Switzerland, but in special sizes and for special purposes American pitch pine is in demand.

The usual dimensions of this imported American pitch pine are: Length 3 to 7 metres and up, (9.8-23 ft); width 21-40 cm. (8.2-15.75 inches); and 1 to 3 inches in thickness. Other dimensions given the writer were boards 8 to 18 feet in length and 1 inch by 4 inches, 1 inch by 5 inches, 1 inch by 8 inches, 1 inch by 10 inches, 1 inch by 12 inches in thickness and width.

Pitch pine rifts: 26mm. (1 inch) thick, 105 mm. (4½ inches) wide and 4 to 6 metres long.

Special boards for chemical works: 1-3 inches thick (mostly 2½ inches), 8 inches and up wide and 12 to 20 feet and up long.

Red pine board dimensions: 8 to 18 feet in length y, b 1 inch by 4 inches, 1 inch by 8 inches, and 1 inch by 12 inches.

The greater part of the spruce and fir boards imported from Austria and Germany run about four metres in length. For larger boards and the large-sized timbers, utilized in car making, factory and bridge building, and in house construction, the American pitch pine is highly prized. One prominent importer of lumber at Basle informed the writer that Switzerland took principally from the United States first quality boards, which must be well manufactured, straight, without prominent knots or defects. Moreover, they should contain no rotten spots nor defective wood nor any waste. If second or third quality lumber is required, access may be had to lumber either obtained at home or in contiguous countries. It was useless, according to this importer, to haul inferior quality lumber over such a distance as from the United States to Switzerland.

The conclusion the writer drew as to the prospects for Canadian board timber in Switzerland was that in the special long sizes of our prime grade Douglas fir from Western Canada a certain amount of business could be procured; and an effort should be made to try out a small cargo shipment with some leading Swiss importer. Once the properties of Douglas fir are known to be similar to those of American pitch pine, and that experience shows its use is equally as satisfactory as that of the long leaf yellow pine, it would seem likely that a part of this American business with Switzerland could be deflected towards Canada.

As regards sawn hard lumber, a considerable amount of oak is purchased. The so-called Slavonian oak from Austria is the chief kind of oak imported and is highly regarded for car construction purposes on account of its soft even texture, conservative grain, favourable seasonable qualities, workability and uniformity of colour, grain and texture. White oak from Germany, France, Japan and the United States in decreasing quantities was imported in 1913, the total quantity of oak boards bought in 1913 amounting to 15,609 tons. In 1920 these oak imports amounted to 10,990 tons, in which Germany, France, Jugo-Slavia (Slavonian oak), and Poland were the principal contributors.

The only sawn lumber which has arrived in Switzerland from Canada during the last few years is classified under the category of "leafy" tree lumber and consisted of a very small parcel in 1913. Austria, Germany, and France are the principal suppliers of this variety of sawn lumber, some 11,632 tons in all having been imported in 1913 and some 9,019 tons in 1920. Ash used for railway and tram seats, panels, etc., hickory for tools and carriages, but principally beech utilized for furniture-making, woodenware and railroad cross-ties, are the leading kinds imported. Limited quantities of cabinet and other fine woods for furniture making come forward normally from the United States and Australia.

RAILROAD CROSS-TIES AND TELEGRAPH POLES

The bulk of the railroad sleepers used in Switzerland are made from oak, and there seems to be a distinct preference for this kind of material. In addition to those prepared at home, about 5,000 tons of oak sleepers were imported in 1913, principally from France and Germany. In 1920 about 300 tons were purchased from the same sources. Sleepers of other quality lumber, such as beech and chestnut, were purchased to the extent of 2,485 tons in 1913, while 561 tons were imported in 1920. Swiss sleepers measure usually 270 x 25 x 15 cm. There is a considerable amount of prejudice to be overcome in introducing non-oak sleepers when these can be obtained.

Swiss telegraph poles are made of pine and fir, and the greater part are produced at home. Native supplies are supplemented by imports from Germany and Austria. The writer was informed that there exists at present sufficient stock to last for the next two or three years, and no further purchases were now likely to be made.

OTHER LUMBER IMPORTS

Among the other lumber imports of Switzerland may be mentioned props and coopeage stock (1,370 tons in 1913 and 597 tons in 1920), veneers of all kinds (719

tons in 1913 and 734 tons in 1920), match wood, etc. (1,371 tons in 1913 and 121 tons in 1920), box shooks and similar material (1,087 tons in 1913 and 1,388 tons in 1920), finished carpentry (480 tons in 1913 and 998 tons in 1920), wooden tools with part metal attachments (258 tons in 1913 and 331 tons in 1920), wooden bobbins (182 tons in 1913 and 342 tons in 1920), furniture (2,518 tons in 1913 and 2,309 tons in 1920), and finished woodenware products (755 tons in 1913 and 813 tons in 1920).

In all this trade German and Austrian manufacturers predominate, and except in small woodenware products as handles and tools and in veneering (where our maple and other hardwoods would most probably be found suitable), there does not seem to be any opportunity of importance for Canadian producers. Canada sold about two tons of woodenware to Switzerland in 1920. In all of the articles just mentioned the United States does very little business.

WOODPULP

The writer found on investigating the Swiss market that when the native paper mills are working to capacity there is a steady demand for foreign woodpulp, and that relatively important quantities are purchased abroad. Mechanical woodpulp imports are much smaller than those of chemical woodpulp and totalled 1,590 tons and 3,845 tons in 1913 and 1920 respectively. In pre-war days Austria and Germany supplied about 80 per cent of the Swiss requirements of mechanical pulp, and Sweden and Norway the remaining 20 per cent. In 1920 the percentage was slightly higher from Germany and Austria and the Scandinavian percentage slightly less.

The unbleached chemical woodpulp which Switzerland imported before the war was principally of German and Swedish manufacture. Total imports in 1913 amounted to 4,284 tons, and of this Germany was responsible for 2,159 tons and Sweden for 1,739 tons. Austria did not figure prominently in these imports, although smaller contributions may be noted from Norway and Baltic Russia. The 1920 import trade of unbleached chemical woodpulp consisted of 3,411 tons, with Sweden supplying about three-fourths of the imports or 2,546 tons, followed by Norway with 454 tons, the Baltic countries with 175 tons, and Austria with 73 tons. Total imports for 1919 (10,453 tons) were over three times those of 1920.

In 1913, 6,192 tons altogether of bleached chemical woodpulp were imported; in 1919, 10,453 tons, and in 1920, 3,411 tons. The pre-war trade was predominantly German (4,380 tons), with Austria sending about one-third as much as Germany and with 128 tons from Sweden. Imports from the United States amounted to something over 100 tons. The 1920 imports were some 2,063 tons, Norway supplying 951 tons, Germany 531 tons, Austria 342 tons, and Sweden 202 tons. No imports are recorded from the United States.

It will be evident from the foregoing examination of imports that Germany and Austria did the greater part of the business before the war, but that latterly the tendency has been to buy more chemical woodpulp from Scandinavia. In discussing the question of placing orders in Canada for woodpulp, Swiss importers told the writer that price quotations would be the determining factor in meeting German and Swedish competition. Switzerland, these importers stated, wanted generally a first-quality chemical woodpulp, 90 per cent dry preferred, clean, and solid. Both sulphate and sulphite pulp are asked for. With the present forecast of quotations indicating that our prices will be competitive with those of Scandinavia this year, it would seem convenient for Canadian exporters to try out this Swiss market. Besides the paper industry, there are factories making artificial silk, one of which the writer visited at Lucerne; and this industry also requires chemical woodpulp.

THE PAPER TRADE

Although practically all kinds of paper are manufactured in Switzerland, an importation in certain lines is necessitated and these imports are mainly of German origin. Take wrapping paper, for example. Out of the 3,000 tons imported in 1913,

and out of the approximate 6,000 tons imported in 1920, Germany supplied about 1,200 and 3,500 tons respectively. Sweden in 1913 shipped about 300 tons, Italy 200 tons, and Holland about 100 tons. In 1920, Austria was the second largest supplier with about 1,000 tons, while Holland came third with about 500 tons, and Czecho-Slovakia fourth with 400 tons. A small quantity weighs from 100-200 gr. per square metre, while the greater part of the imports are of a heavier quality and include a certain amount of wax paper. Wrapping paper dimensions—so the writer understands from importers—are 90 by 120 cm., and 100 by 140 cm. (doubled). The imports of tissue paper weighing 25 grammes or less per square metre are also mostly of German manufacture and consisted altogether of 784 tons in 1913 and 470 tons in 1920, of which Germany contributed about 70 per cent in 1913 and about 75 per cent in 1920. Here too Austrian imports are not unimportant, and Sweden and France carry on a small trade. Great Britain shipped 30 tons to Switzerland in 1913, but only two tons in 1920.

About four times as much newsprint was imported in 1920 (1,226 tons) as in 1913 (332 tons). The trade was practically all German in 1913, while in 1920 about 70 per cent of the imports came from Germany. The Baltic countries were responsible for 126 tons in 1920, and Austria for 210 tons. The usual weight of newsprint is 45-55 grammes per square metre. Rotary newsprint runs from 88 cm. to 176 cm. and sheet newspaper 70 cm. by 100 cm.

The imports of all other printing, writing and drawing paper amounted to 4,419 tons in 1913 and to 9,758 tons in 1920. The importation from Germany was 3,472 tons in the pre-war year with smaller consignments principally from Austria (449 tons), England (223 tons), and France (200 tons). In the total Germany led with 7,778 tons and was followed by Austria (789 tons), France (523 tons), Belgium (203 tons), and England (169 tons), mostly fine writing paper in the order named. The Scandinavian and Baltic countries contributed together 172 tons. This is practically the only kind of paper which the United States sold to Switzerland in 1913, but the 6 tons in 1913 and the 26 tons in 1920 are relatively very small amounts.

The imports of the lighter type of cardboard (200-300 grammes per square metre) amounted to 378 tons in 1913 and to 618 tons in 1920. Excluding German imports, this import trade is negligible. The heavier type of cardboard weighing over 300 grammes per square metre, also comes principally from Germany and amounted to 262 tons in 1913 and to 381 tons in 1920. The United States exported about 79 tons of the heavier cardboard to Switzerland in 1920.

It hardly seems from the foregoing that there is any ready market in Switzerland for Canadian paper. Apart from the important native paper industry, imports are too much of a German and Austrian character to warrant the statement that the paper market holds out favourable prospects for Canadian business. Prices would necessarily in most cases have to be competitive, and except perhaps in fine writing and printing papers and in cardboard imports, our chances of doing business are not at present very appreciable. It is to be noted, however, that Scandinavia does fairly well in some lines and that the purchases of American writing and printing paper and heavy cardboard are increasing.

THE TEXTILE TRADE

Cotton.—The balance of trade so far as cotton textiles are concerned is decidedly in favour of Switzerland. This is largely due to the heavy exports of Swiss embroideries which are known so well throughout the world's principal buying markets. Moreover, when it is considered that Switzerland bought some 27,275 tons of raw cotton in 1913 and almost 4,000 tons of yarns and 21,058 tons of raw cotton in 1920 and over 4,600 tons of yarns, it is clear that this small country has built up an important cotton industry. Notwithstanding, Switzerland finds it necessary to book orders abroad for cotton textiles inasmuch as either the local consumption is greater than

the available home manufacture, or that foreign textiles are needed for the Swiss finishing industries, or that a demand exists in some instances for what is considered the better product bought abroad. In the cotton textile trade it is Great Britain and France and not Germany which holds sway, and if Canadian manufacturers are in a position to offer a quality equally as good and as acceptable as the English-made article and to quote competitive prices, a certain amount of business could be done but hardly otherwise.

IMPORT STATISTICS

The table which follows shows the Swiss imports of the principal cotton piece goods in 1920 and 1913:—

	1920 Tons	1913 Tons
Cotton cloth unbleached.. . . .	2,745	4,627
bleached.. . . .	347	214
coloured in the piece.. . . .	319	310
printed.. . . .	484	321
coloured in the yarn.. . . .	516	522
Velvets.. . . .	159	170
Tulle.. . . .	83	147
Other cotton textiles.. . . .	373	473

Unbleached Cotton Cloth.—In the unbleached cotton cloth four qualities are imported, viz., (1) weighing 12 kilos or more per 100 square metres; (2) weighing 6-12 kilos per 100 square metres; (3) weighing less than 6 kilos per 100 square metres and having less than 20 threads in a 25 mm. square; and (4) weighing less than 6 kilos per 100 square metres but having 20 threads or more in a 25 mm. square. The bulk of the trade, or about 80 per cent valued at 50½ million francs in 1920, is done in the second quality of unbleached cotton. Great Britain supplied about 88 per cent of the total requirement in 1913 and about 87 per cent in 1920. Germany was the next largest contributor in 1913, and was followed by Italy which in turn was the largest source of supply in 1920, followed by Austria.

Bleached Cotton Cloth.—The present trade in dyed or coloured piece goods is over 55 per cent English (179 tons in 1920), with France (64 tons) contributing nearly the same quota as Germany and Italy combined. A small shipment of something over a ton was credited in 1920 to the United States. In the pre-war year England and Germany broke about even in the trade, and together supplied about 82 per cent of the total imports. The orders for this material executed in the United States for 1913 were only two tons.

The Print Trade.—In the pre-war print trade Germany led in the exports to Switzerland with 148 tons. England's contribution was about 87 tons out of the total 321 tons imported. France supplied 46 tons, and Italy 34 tons. The quantity purchased in the United States was negligible. Sources of supply, however, changed in 1920 and France became the leading contributory country with 221 tons, followed by England with 162 tons. Italy's share in this trade was 41 tons, Austria's 23 tons, and Germany's 31 tons. Here again imports from the United States are relatively negligible.

Cotton Piece Goods Dyed in the Yarn.—The imports of the cotton piece goods dyed in the yarn, were German and Austrian material to the extent of 63 per cent in 1913. Belgium was the next contributor with 77 tons, while England's share was only 17 tons. France in 1920 was by far the most important source of supply with 184 tons, and was followed by England with 100 tons which was a much better showing than in 1913.

Velvets and Tullies.—The velvet trade was predominantly English in 1913 although Germany, and France especially, shared in these imports. In 1920 the only large supplier was England with much smaller quantities arriving from France, Italy and

Germany. The imported tulles needed in the fine embroidery industry, from being mostly of German origin in 1913, were largely of English manufacture in 1920. France in both years sent forward small consignments.

Other Cotton Piece Goods.—In cotton piece goods not otherwise specified including piqués, damasks, brocades, dimities, etc., Germany stood first in meeting Swiss requirements in 1913, followed by France, Belgium, England, and Italy. In 1920 this trade was largely French, but in which England, Italy, Germany and Belgium also participated.

SUMMARY

To sum up, it may be stated that the greater part of the cotton textile trade goes at present to Switzerland, and to English and French manufacturers. German competition is not now very severe, and the tendency has been throughout the past two years to buy increasingly from England and France. Moreover, it may be noted that the United States does relatively a negligible amount of business with Switzerland in cotton piece goods. In some lines—and this is the point to be noted—Switzerland does not produce quite as fine a material as does England and France, and it is in these special piece goods that foreign competition is oftentimes most telling. For example, zephyrs for high-class shirtings, the writer was informed, are imported as Swiss manufacturers find it difficult to make the raised squares and to produce a quality as good as that of England. Again the flannel used in Switzerland is practically all English because of its recognized superiority, and because of its soft silky finish. The French twill is also greatly appreciated. During the past summer season there was a big run on sponge cloth, and although the native product was good, the English quality was generally preferred.

A textile importer also informed the writer that no very large range of patterns in prints, and twills, etc., was necessary for the Swiss market as in the villages many people will have a blouse or dress made off the same length. As a general rule, it may be further noted, broad stripes in cotton piece goods are not popular in Switzerland.

With regards to lengths and widths, a large house handling cotton piece goods stated that it was not absolutely necessary to ship in the metric units. The average width for most cotton piece goods was stated to be 29-32, while the length generally went 50 yards to the piece.

WOOLLEN TEXTILES

Although the cotton textile industry takes precedence over the woollen industry in Switzerland, yet this latter has taken on fairly large proportions. In 1913, for example, some 4,737 tons of raw wool and 405 tons of wool waste were imported, which about corresponds to the 1920 importation. Moreover, 1,639 tons and 1,036 tons of woollen yarns were imported in 1913 and 1920 respectively. Thus a fairly important industry exists and cares for the needs of a considerable part of the population. The climate of Switzerland is such that woollen cloth is especially in demand for the winter months, and in parts of the country the warmer clothing is almost essential for all-year wear. Hence, as Swiss production is not sufficient to meet national requirements, and as Swiss material is not always wanted by the clientele, it is necessary to resort to foreign countries to supplement local manufacture.

Altogether in 1913, 2,298 tons of woollen piece goods were imported, and in 1920 some 1,777 tons. In the pre-war trade, Germany shipped 1,443 tons of the principal woollen textiles imported into Switzerland, while the imports from Great Britain amounted to 444 tons and the imports from France to 263 tons, with smaller contributions from (chiefly) Belgium, Italy, and Austria. In 1920 the sources of supply are somewhat changed. England was responsible for 992 tons, France for 426 tons, and Germany for 167 tons. Belgium and Italy also maintained their share in the trade.

The largest trade is done in the heavier piece goods, viz., those weighing more than 300 gr. per square metre, although the imports of the lighter stuffs are not very

far behind. It is in the finer quality suitings that England predominates in this market, and importers told the writer that there was a constant and insistent demand among not a few purchasers for English material. The United States in 1920 sold a small amount of woollen textiles to Switzerland, in all about 10 tons, as against no shipments in 1913. The direction of trade, however, seems to lie toward England, Germany and France.

THE FUR MARKET IN SWITZERLAND

From conversations which the writer had while in Switzerland, the conclusion was drawn that Canadian furs and skins could be sold there. A furrier at Geneva stated that over a half a million dollars' worth of furs were sold annually in that city, while total Swiss imports averaged around \$2,000,000. The greater part of the Swiss fur purchases are made on the London market and importers claim that it would be preferable to buy direct from originating countries. The fur trade is naturally one of long credits and confidence, but once the right connection is found in cities like Geneva or Zurich, it would seem very likely that important business could be put through.

THE RUBBER GOODS MARKET

Among the rubber goods which Switzerland imports, there is quite a considerable trade offering in such products as rubber tires, galoshes, rubber sheeting, and toilet articles. It is difficult from the import statistics to separate out each item and give each commodity its relative importance. But it is clear that the most important business is done in rubber tires, some 594 tons having been imported in 1913 and 1,222 tons in 1920. This increase may be largely attributed to the greater use of motor cars in the principal cities, and also to the greater use of motor lorries in transport. Whereas in the pre-war trade Germany was the principal supplier, in the present imports, France has moved up from second to first place, while the English product has assumed second place. The tendency of late has been to draw more heavily on both England and the United States, and in 1920 the exports from Great Britain of 215 tons were twelve times those of the 1913 exports to Switzerland, while American exports have jumped from half a ton in 1913 to 189 tons in 1920. Inasmuch as the United States is doing so well in this market, it would seem that Canadian exporters should share in this available trade.

There is also a fair amount of business done in galoshes, especially in the cities, although it may be noted that these are not worn nearly as commonly in a rainy season as in Canada. France supplies at present the greater part of these requirements. In the toilet articles English and German trade marks predominate. Rubber sheetings and waterproof cloth are largely of English origin. England and France now do the bulk of the trade in rubber goods for industrial purposes, although this business was largely in German hands before the war.

ASBESTOS AND MICA

In the pure mineral group of imports, Canada's important trade with Switzerland is being carried on in asbestos and mica. In 1920, for example, out of the 2,265 tons of these materials imported, Canada stood first with 1,365 tons. In 1913, however, due to the mica contribution made by Russia, this country came first in imports and supplied 1,617 tons, or about five times as much as did Canada. Mica is used to a large extent in the electrical industries of Switzerland, and owing to their importance the market for mica should be intensively developed. From Italy comes a certain amount of asbestos, but Canada's share is much more important. In semi-manufactured asbestos products and in sheet mica the import trade is now characteristically English, although largely German in the pre-war years, while manufactured asbestos products as formerly arrive principally from Germany.

COPPER, TIN, ZINC, LEAD, AND NICKEL

The total Swiss imports of copper, tin, zinc, lead, and nickel in bars, ingots, sheets, wire and pipes, were as follows in 1913 and 1920:—

	1913	1920
	(Metric Tons)	
Copper.. . . .	12,570	17,690
Tin.. . . .	1,450	1,040
Zinc.. . . .	3,640	3,750
Lead.. . . .	7,080	8,780
Nickel.. . . .	460	190
	<hr/> 25,200	<hr/> 31,450

Copper.—In 1913 the United States supplied 75 per cent of Switzerland's requirements of bar, ingot, and disc copper, the total imports amounting to 1,272 tons. In 1920 the United States showing was almost 80 per cent of the total imports of 7,029 tons. The imports of copper bars and sheets are about evenly divided between France and Germany, some 3,398 tons being brought into Switzerland in 1913 and some 2,763 tons in 1920. Over against no imports of copper wire from the United States in 1913 but with a total importation of 5,134 tons, also about equally divided between France and Germany, the United States led in these imports in 1920 with 1,539 tons, followed by France with 1,482 tons and by Germany with 1,326 tons. Italy also exported to Switzerland 80 tons and Great Britain 85 tons of copper wire in 1920.

The trade in copper tubes is principally German and French, some 528 tons and 445 tons being imported in 1913 and 1920 respectively.

The only recorded copper exports from Canada to Switzerland is one ton of finished copper goods in 1913 and 200 cwt. in 1920.

REFRACTORY MATERIAL

Switzerland's imports of refractory and similar material amounted to 63,956 tons in 1913 and to 46,302 tons in 1920. Although Germany has always been Switzerland's chief source of supply in this connection, with France, Austria, and Great Britain making smaller consignments, yet it is interesting to notice that in 1913 Canada is credited with 125 tons. No Canadian imports came forward in 1920.

COAL

As Switzerland is to all intents and purposes dependent on foreign sources of supply for her coal requirements, and as coal plays such an important part in her industrial and civil life, these imports bulk up very large, and in fact constitute Switzerland's greatest expenditure abroad. For example, nearly 2,000,000 tons were imported in both 1913 and 1920, although the imports for 1921 do not promise to be equally so heavy, on account chiefly of the industrial slump and the reduced goods traffic on the railways. The significance of the 1913 and the 1920 coal trade returns, however, lies in the fact that whereas Germany previously controlled this trade, the present buying is conspicuously from the United States. The table which follows illustrates this changed condition:—

From	1913	1920	Jan.-Sept., 1921
	(Tons with 000's omitted)		
Germany.. . . .	1,590	299	189
Austria.. . . .	5	....	....
France.. . . .	196	49	81
Belgium.. . . .	130	87	126
Holland.. . . .	15	....	18
Great Britain.. . . .	30	290	125
United States.. . . .	....	1,208	257
Poland.. . . .	....	....	1
	<hr/> 1,969	<hr/> 1,935	<hr/> 801

This heavy buying of American coal has been due to the derangement of Switzerland's normal sources of fuel provisioning. As is evident from the foregoing table, about four-fifths of the Swiss coal needs were satisfied by the German coal from the Saar and the Ruhr districts in 1913. Throughout the war, however, Switzerland made what best arrangements she could for her coal supply, and ever since 1916 the coal question has been a crucial one, and many interstate coal agreements with Germany, France, and Belgium, generally conditional on compensations in the forms of credits, have been made.

During the spring of 1920, when Switzerland still found that the country could not be guaranteed the necessary coal by the European countries, long-period-delivery contracts were made with the United States, and it is because of these special stipulations that America has been piling up her coal in Swiss stores. In 1920 the United States sent over 1,200,000 tons of coal to Switzerland, or about 63 per cent of all Swiss coal imports, but it was exceptional circumstances which prompted recourse by a country in the middle of Europe to such a distant supplier. The cost of sea freights will in all probability prove normally the decisive factor, and Switzerland will revert to German, French, and English sources as formerly. The writer was informed that German and French coal was much preferred for domestic purposes and English and American coal for the railways, gas works, and industries. If, however, German, French, and Belgium imports of coal will have to be supplemented, it will most likely be to Great Britain and not to the United States that Switzerland will normally turn. If the writer considered the recent United States coal imports as of a permanent nature he would point out Canada's opportunity, but in view of the situation as it has just been stated, the prospects for exporting Canadian coal to Switzerland cannot be considered bright.

THE IRON AND STEEL IMPORTS

The imports of manufactured iron and steel into Switzerland, as pig-iron, ingots, billets, blooms, etc., amounted to 122,880 tons in 1913 and to 82,000 tons in 1920. Almost half of these pre-war imports were derived from Germany, France being the second largest supplier and England the third. Smaller arrivals come forward, principally from Belgium and Sweden. During 1920, however, Germany no longer held the commanding position in this market, but France exported 40 per cent of this material, England 23 per cent, Germany 19 per cent, with smaller percentages from Czecho-Slovakia, the United States, and Sweden. In fact the imports from the United States were almost 50 per cent of the total. The available statistics for 1921 show that France is exporting these products to Switzerland in the ratio of more than two to one with Germany. There is also evidence that American exports are declining, and English exports have also greatly fallen off. The writer is not inclined to argue for Canadian trade in this particular market. France, Germany, Belgium, and England are all too near and the course of trade too well established to premise such an argument for bulk products with heavy freights.

SEMI-MANUFACTURED IRON AND STEEL PRODUCTS

Inserted herein are the principal Swiss imports for 1920 of semi-manufactured iron and steel products: iron bars (120 mm. or more in diameter), 3,651 tons; iron bars (75 mm.-120 mm.), 3,701 tons; iron bars less than 75 mm. in diameter, 28,087 tons; iron bars (5-13 mm.), 8,648 tons; iron plates (from 100 square cm. and up), 4,645 tons; iron and steel plates (36 square cm. to 100 square cm.), 6,598 tons; iron and steel plates (less than 36 square cm.), 21,088 tons; specially forged or hot-rolled steel, 46,094 tons; drawn or cold-rolled steel, 6,004 tons; and sheet iron and steel, 53,483 tons. It does not seem necessary here to detail the corresponding figures for 1913. Sufficient is it to state that the imports of iron bars and plates were heavier by 13,800 tons in 1920 than the imports of 1913; the imports of specially forged and rolled steel some 10,000 tons less in 1920; and the imports of sheet iron some

7,000 tons less. This trade was not only predominately German before the war, but Germany to-day occupies the leading position in these imports. France surpasses Germany in certain products as special steels, while Belgium, England, and Czecho-Slovakia are the other chief sources of supply. The United States contributed about 5,000 tons to these imports in 1920 as against 500 tons in 1913. This increase is very creditable, and is due chiefly to the larger consignments of iron and steel sheets. In the other categories referred to American trade is not important. Whether the United States will maintain this trade will be determined by the prices at which American exporters are able to lay down these goods in Switzerland.

RAILWAY MATERIAL

The imported railway material consists principally of rails weighing from 15 kilos. up per metre, and this trade is taken care of by Germany and France, the present tendency being for Switzerland to revert as formerly to Germany in these purchases. The total quantity of railroad material imported in 1920 amounted to 34,454 tons, or less than half the 1913 imports of 77,750 tons.

IRON PIPES AND TUBES

Germany is also the principal country of origin for the iron pipes and tubes which Switzerland imports, nearly all of which are welded. In 1913 the total importation amounted to 11,537 tons, and in 1920 to 8,716 tons. Whereas the United States was the second most important contributing country in 1913 in this trade, American exports fell off very considerably in 1920, Belgium and Czecho-Slovakia each doing more business than the United States. The American showing is still unfavourable for 1921. The import trade in fittings was some 5,583 tons in 1920 and some 7,724 tons in 1913. About 24 tons arrived from the United States in 1920.

HARDWARE AND TOOLS

Among the Swiss imports of tools and hardware of interest to Canada may be mentioned files, agricultural implements, small hand and precision tools, rivets, screws, bolts and nuts, builders' hardware, nails, safes, stoves, wirework, sheet metal products, and cutlery.

Files.—In the pre-war days of 1913 some 13 tons of files were imported, and in 1920 some 125 tons. This trade is participated in chiefly by Germany and the United States, the former country supplying about 65 per cent of these imports in 1913 and about 55 per cent in 1920. The respective percentages for the United States were 20 per cent and 24 per cent. Austria, Belgium, France, and Great Britain also share in this trade. The largest trade is done in files from 16 to 35 cm. long, followed by the longer files of over 35 cm. and by the shorter files under 16 cm. in length.

AGRICULTURAL IMPLEMENTS

In the agricultural implement line, e.g., in forks, scythes, sickles, shovels, spades, etc., Canadian instruments were not new to the Swiss trade before the war. Latterly, however, this trade has slackened off, although in Geneva the writer saw Canadian-made forks and rakes prominently displayed in a large up-town hardware store. The manager of this company informed the writer that he had got in touch with the Canadian manufacturers at the Lyons Fair of 1919 and had given since then a few small orders to this company. In the opinion of this importer our implements were of excellent quality but somewhat higher priced than those which come forward from Germany, whence the main imports are derived. The total volume of these imports reached 731 tons in 1920 and 575 tons in 1913, the imports from Canada in these years amounting to a little over 1 ton and to 4 tons respectively. The exports from Germany in 1920 were 443 tons and from the United States 129 tons, while in 1913 the

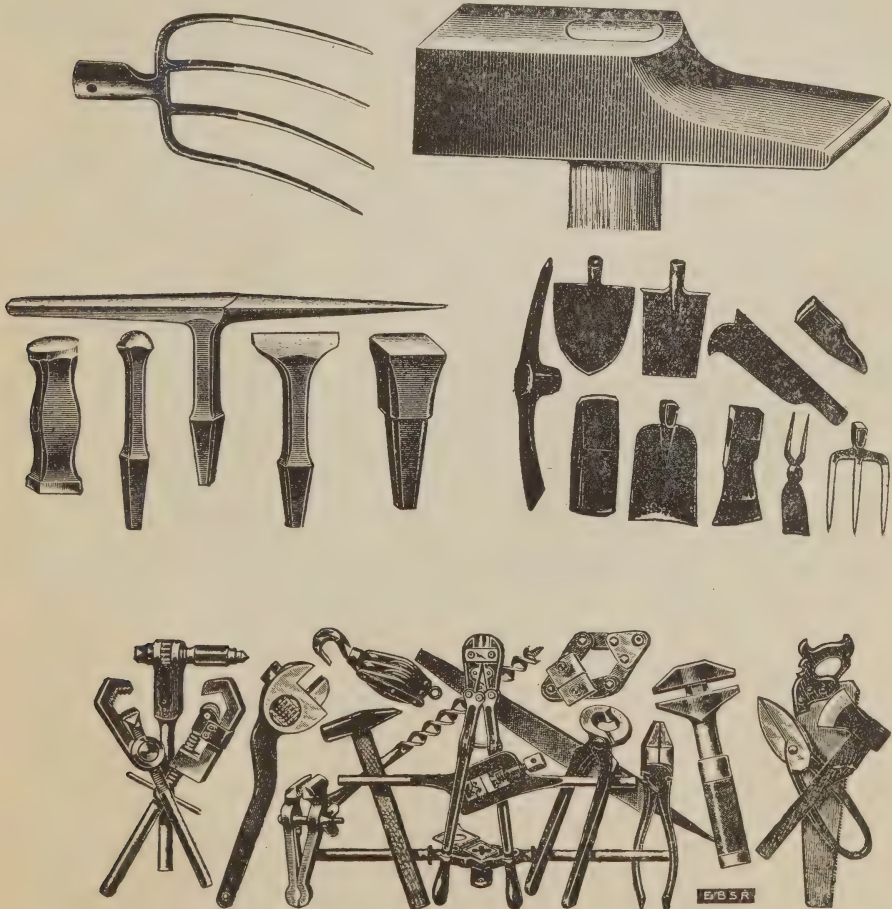
corresponding figures were 360 and 118 tons. This is one of the smaller lines which is a specialty of Canadian industry, and the writer believes that even more than our pre-war trade could be done if competitive prices could be offered. Oftentimes it is preferred to buy the implements without the handles and attention might well be given to this point.

SCYTHES AND SICKLES

Sickles and scythes, it may be noted, are to be found in practically every farmhouse, nor should it be forgotten that Swiss farmers, in view of the nature of the country, often have to cultivate small parcels of land where agricultural instruments and not machinery can alone be used.

OTHER SMALL TOOLS

The volume of all other tools imported (including small precision tools) totalled some 2,176 tons in 1920 and some 961 tons in 1913. This trade was in 1913 and is to-day largely German, France being the second most important competitor. Altogether, 107 tons of all kinds of small tools apart from agricultural implements were imported from the United States in 1920. The illustrations which follow show some of the principal agricultural and other tools commonly sold in Switzerland.



OTHER HARDWARE PRODUCTS

In 1920 and 1913 Switzerland imported respectively some 267 tons and 194 tons of link chains, 309 and 114 tons of iron wire and cable, 1,310 and 2,048 tons of rivets, screws and nuts (the largest sales in those whose diameter is less than 11 mm.), 229 tons and 432 tons of builders' hardware such as locks, etc., 876 and 746 tons boxes, 867 and 1,638 tons of stoves and ranges, 617 and 595 tons of safes and strong boxes, 847 and 868 tons of wire lattice work, 2,758 and 1,847 tons of sheet metal products, 213 and 120 tons of cutlery, and 52 and 70 tons of rifles, arms, etc. In each of these trades Germany has held the commanding position of pre-war days, with France the next best supplier. Austria and Great Britain are credited with much smaller quantities, while the imports from the United States are very meagre. Canadian hardware and hollow-ware exports to Switzerland have been up till now practically nil. The import hardware business is not relatively a large trade, and both Germany and France especially are well established in the market. It should be noted, however, that Swiss workmen want as a general rule a better tool than do many of the other European countries, and it is only in our best-made products that we could hope to compete on this market. A hardware product, the writer was informed by merchants and importers, often sells on its trade mark alone, and it would seem necessary to build up a reputation for Canadian hardware products before repeat orders on a larger scale can be expected.

The imports of cast iron products amounted to 6,027 tons in 1920 and to 9,486 tons in 1913, and the imports of malleable iron products totalled 4,494 tons and 5,795 tons in the same years. This trade is practically German and French.

MACHINERY

The market generally for Canadian machinery in Switzerland is limited by the fact that Switzerland exports considerably more machinery than it imports, and by the fact that the preponderating part of the machinery which is imported comes from Germany, whose nearness even at normal exchange is an appreciative handicap to a country as distant as Canada. To look at the import statistics and see that Switzerland imported almost 48,000 tons of machinery in 1913 and over 70,000 tons in 1920, valued at 69,340,000 fr. and at 202,045,000 fr. respectively, might lead one to jump to a hasty conclusion as to the claim of this market on Canada. When one considers, however, that Germany did over half of this trade in 1913, and that France, Great Britain, and Austria figure fairly well in the remainder of the imports, the outlook for Canadian machinery business in Switzerland is not so large as at first it might appear. Moreover, local production not only supplies a very important part of the country's requirements, but Switzerland exported in 1913 almost 60,000 tons of machinery valued at 109,365,000 fr. and over 70,000 tons of machinery in 1920 valued at 302,273,000 francs. These facts should be premised before promising ourselves too much in these general machinery lines, although the writer believes from his investigations that a certain amount of this import business should come our way.

There is shown hereunder the Swiss imports of the various kinds of machinery for the years 1913 and 1920:—

	1913	1920
	(Metric Tons)	
Steam and other boilers in iron.. . . .	3,030	2,957
Steam and other boilers in other metals.. . . .	37	57
Steam and electric locomotives.. . . .	216	276
Textile machinery.. . . .	3,111	3,591
Sewing machines.. . . .	1,117	1,601
Printing and book-binding machinery.. . . .	1,047	1,776
Agricultural machinery.. . . .	3,517	5,130
Electric dynamos.. . . .	750	379
Paper-making machinery.. . . .	1,290	1,097
Flour-milling machinery.. . . .	128	185
Hydraulic motors.. . . .	393	374
Steam turbines.. . . .	763	354
Gas, petroleum, benzine, etc., motors.. . . .	119	326
Machine tools.. . . .	3,867	11,187
Machines for making food products.. . . .	1,358	1,737
Other machinery.. . . .	9472	9,051
Non-upholstered automobiles.. . . .	493	4,891
Upholstered automobiles.. . . .	601	7,175

In all of these imports the bulk of the total, as previously pointed out, was of German origin. In the textile machinery group Great Britain and France contributed to some extent, while the United States is represented principally in agricultural machinery imports, engines and machine tools. American exports to Switzerland under this category for 1920 may be listed as follows: steam boilers, 2 tons; textile machinery, 13 tons; sewing machines, 61 tons; printers' and bookbinders' machinery, 49 tons; agricultural machinery, 1,030 tons; electric dynamos and transformers, 16 tons; pulp and paper making machinery, 2 tons; flour milling machinery, 4 cwt.; hydraulic motors and pumps, 5 tons; engines, portable and stationary, 114 tons; machine tools, 308 tons; refrigerating machinery and machinery for manufacturing food products, 22 tons; cement making machinery, 1½ tons; and all other machinery n.o.s., 344 tons.

MOTOR CARS AND LORRIES

It is only of late that all the Swiss cantons have been thrown open to automobile traffic. In fact the restrictions on motor car circulation were removed last summer from the last canton, viz., the Grisons, which had held out so long against their introduction. The Swiss think they have other sports, such as walking and mountain-climbing, which are far more enjoyable than motoring, and they have even gone further and claimed that automobiling interferes with their more normal diversions. Hence it is that in many of the cantons no motoring is allowed on the highways on Sunday afternoons and holidays. These are the days for pedestrian excursions, and the excursionist doesn't wish to be pelted with dust as he goes along the country roads on holiday bent. Therefore the cantonal governments respect the feelings of their inhabitants, and decree according to their wishes.

Apart from this consideration, there is on the other hand the fact that automobiles are not being manufactured in Switzerland. Three companies started production a few years ago, but have since gone into liquidation. The motor cars used therefore have to be imported, and despite a certain prejudice against them in certain quarters, there exists an opening in Switzerland which cannot be disregarded. The imports for 1920, for example, were more than ten times those of 1913 and totalled some 12,000 tons.

As Switzerland is for the greater part a country of hills, a machine which can climb well is most needful. The touring car is preferred to the limousine and a medium-sized car to the largest models. Italian and French cars are seen in considerable numbers at Zurich and Geneva, while the Mercedes mark is gaining in popularity. Few English cars are in evidence, but the Ford and other American types obtain a certain number of orders. The Swiss market for automobiles is not large

and is keenly contested, but Canadian manufacturers should be able to sell a small number each year, if the question of sale is taken competently in hand.

With regard to motor trucks, it has already been pointed out that lorry transport is considerably developing in Switzerland and promises to be a factor in internal distribution. A one- or two-ton truck, and even trucks with a larger capacity, will probably be required in increasing numbers with the depletion of the army stock now in hand, and this market should not be overlooked.

AGRICULTURAL MACHINERY

The most interesting individual item to Canada in these imports is that of agricultural machinery, not only because the American trade is largest in this line, but further because we are already exporting something of this in Switzerland. In 1913 Canada shipped altogether some 72 tons of agricultural machinery to Switzerland, but for 1920 and for 1921 no Canadian exports are registered in the Swiss statistical returns. The writer happened to see, however, new Canadian machinery in Switzerland last summer, but apparently this must have arrived via a transit country.

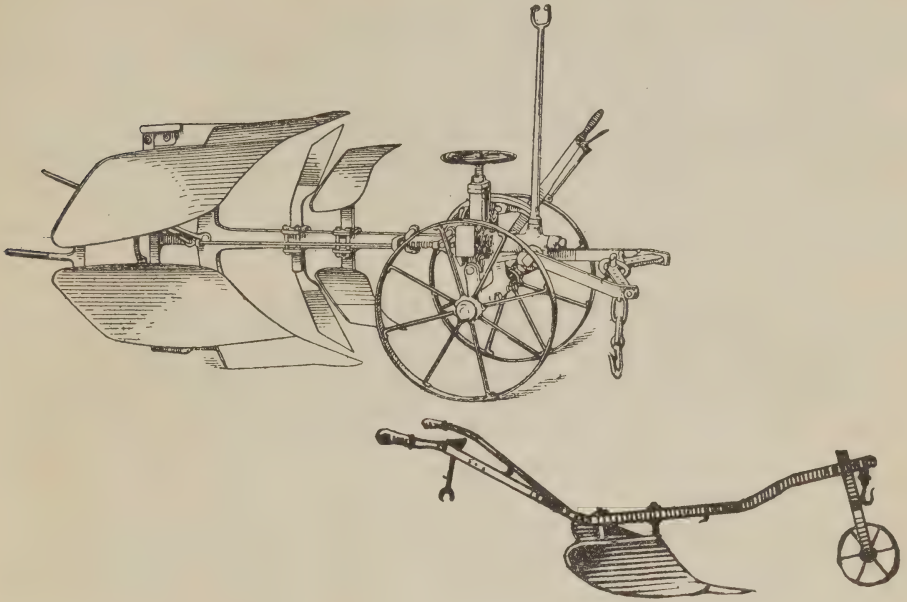
Now, in any study of the Swiss agricultural machinery market, it is necessary to keep in mind that the field for exploitation is by the geographical nature of the country very small. Prince Edward Island could hardly be considered a big market for agricultural machinery, and yet in an area of cultivable land about this size lies the extent of the Swiss market. Included, moreover, in this area is the land devoted to field crops and gardens, to grass and meadows, to fruit growing and forests. Another point to be noticed is the fact that Switzerland is a country of very small holdings and that few farmers own more than five to ten acres of land and five to ten head of cattle. Not only this, but the five to ten acres may often in part be situated on hill slopes, thus rendering "perpendicular" farming necessary. It is evident, therefore, that the demand for agricultural machinery must at best be greatly restricted in Switzerland, and it is further evident from the foregoing that in this restricted market there is considerable competition for the trade which is offering.

In 1913 ploughs, harrows, cultivators, seeders, drills, rollers, etc., came principally from Germany which supplied 652 tons out of the 960 tons imported. France was the next most important supplier, with 183 tons, followed by the United States with 101 tons, Canada with 46 tons, and with much smaller allotments from Belgium, Great Britain and Italy.

In 1920 out of the 870 tons imported, Germany sent forward 714 tons, the United States 70 tons, France 56 tons, Austria 15 tons, and Belgium 12 tons.

Ploughs.—The most serious competition Canadian manufacturers will meet in attempting to introduce any one class of farm machinery will be in the sale of ploughs. Not only are they made locally, but Continental competition is especially keen and to a lesser extent that of the United States. The plough in most general use is perhaps the double Brabant, which has one plough inverted above the other so that when a furrow is completed in one direction the plough is turned upside down and goes in the opposite direction in the same furrow, which thereby avoids the necessity of creating dead and bulk furrows. This Brabant type of plough—a model of which is reproduced—as commonly sold in Switzerland, weighs from 120 to 168 kilos, makes a furrow from 5 to 30 cm. deep, and 18 to 45 cm. wide.

Another type of plough, chiefly of German origin and used in Switzerland, is also shown below. This plough is light, weighing only some 80 to 90 kilos, and is fitted with a front wheel carriage, fastened to the steel beam. In fact, numbers of the ploughs sold in Switzerland are furnished with steel beams, and the writer



was informed by one of the largest houses dealing in agricultural machinery in Switzerland that the wheel carriage is one of the essentials which is lacking in American ploughs exported to Switzerland. The most popular size of plough cuts a furrow 10 to 12 inches in width, while a certain demand exists for smaller sizes. Riding ploughs are not in general use in Switzerland.

The writer saw a few Canadian tractor ploughs in Switzerland in the warehouse of a large importing firm at Zurich, but American tractor ploughs hold this relatively small market. The common demand is for the two-bottom outfits. The average ploughing is at a depth of 5 to 7 inches both with the horse and tractor ploughs.

Harrows.—Harrows of peg-tooth variety are imported principally from France and Germany, although the United States do a certain amount of trade in this line. Much smaller business is done in the spring-tooth harrow while disk harrows have not been introduced to any extent. The spike-tooth harrow is often sold with the lever adjustment for raising and lowering the teeth and is furnished in one or two sections generally. The teeth average 35 in the most common peg harrows sold by a large distributing house at Berne.

Drills and Seeders.—The sowing of grain is oftentimes done by hand or else generally with broadcast seeders. The hoe drill is to some extent popular, and its most successful type in Switzerland comes from Germany and Austria, where is manufactured an excellent machine which is strong and durable and constructed along the lines best adapted to the local needs. These machines are equipped with a device whereby certain of the feed runs can be eliminated for various kinds of special work. The sizes in demand range from 1 metre in width up with 7 or 11 hoes from 5-6 inches apart.

Rollers.—Land rollers are quite extensively used by the farmers. As most of the farms are small and as grain and grass are almost exclusively grown, usually with but

one ploughing, the farmers harrow the ground after ploughing and roll it after sowing. Although only log or wooden rollers are very frequently met with, yet the cylindrical steel roller of 52-65 cm. in diameter, of some 160 cm. in width and made in two sections, is frequently seen. Germany does the largest part of this import business.

Manure spreaders.—Very few manure spreaders are employed in Switzerland, although a German machine holding some 108-144 litres with a scattering surface some $\frac{1}{2}$ to 2 metres in width, weighing from 265-300 kilos, has met with a certain amount of success.

Cream Separators and Grain Grinders, etc.—In the category of grain cleaners and grinders, and cream separators, etc., the total Swiss imports in 1920 amounted to 295 tons, Germany shipping 200 tons of this amount, Sweden and Austria each 33 tons, with 25 tons from France, 2 tons from the United States, and something over 1 ton from Denmark. Over against these 1920 imports are 110 tons in 1913, Germany supplying in that year 54 tons, France 28 tons, Sweden 23 tons, and the United States 3 tons.

The Swiss cream-separator trade is dominated by Swedish manufacturers. These machines are commonly known and used throughout the dairy sections. The demand is largely for small-sized machines as the average farmer's herd is small.

The imported grain grinders as sold in Switzerland are largely of German origin. The type of machine sold is usually small with a capacity of grinding up to 200 kilos per hour. Not a great many of these are imported, as they are also made locally.

Small Engines.—There is a fairly large sale in Switzerland of portable and stationary engines of $1\frac{1}{2}$ to 8 h.p., both vertical and horizontal, for straw cutting, grinding, cream separating, pumping and wood sawing. Altogether some 192 tons were imported in 1913 and some 326 tons in 1920, and although the bulk of supplies came from Germany, the United States was the second largest contributor in 1920 with 98 tons, principally in the horizontal type of petrol engine.

Other Agricultural Machinery, including Haying and Grain Harvesting Machinery, etc.—The imports into Switzerland under this heading constitute the most important class of agricultural machinery brought in from abroad. In 1920, moreover, the imports were considerably heavier than in 1913 and amounted to 3,643 tons as compared with 2,057 tons in the last pre-war year. This trade is not so pronouncedly German, and especially is this so as regards the reapers and binders which are purchased by Switzerland and which are largely of American origin. True, this business is not exceptionally large, but the International Harvester Company fill a certain amount of satisfactory orders every year, while Canada in 1913 exported 26 tons under this heading, most of which trade consisted of our reapers and binders. This Canadian trade, however, has latterly been allowed to drop. A small amount of business is also obtained by England in harvesting machinery, but the total is unimportant. Because of the smallness of the Swiss farms, the demand is for the 5- and 6-foot binders rather than the larger types and for mowers with a cut of from $3\frac{1}{2}$ -5 feet. The writer was also informed that the farmer often avoids the necessity of buying a binder for a small patch of grain by getting a reaping attachment with his mower. Mowers are to some appreciable extent imported from France and Germany.

A not too heavy type of rake is generally preferred weighing not more than 200 kilos, having 32 teeth and a cut of 180 cm. The teeth are sometimes shaped differently than in the American rake in order to avoid digging into the ground when the stubble is very short. Side delivery rakes are also in the market and are quite commonly used.

Hay loaders and pressers are not used in Switzerland to any appreciable extent.

Tractors.—The opportunity for selling tractors to individual farmers is not very promising on account of the general smallness of the farms. In 1917 motor-ploughing demonstrations were carried on with American tractors and ploughs, and a certain amount of interest was aroused in their use among some of the more important agri-

cultural associations, where the actual sale openings lie. Some 8-16 h.p. (4 cylinders) American tractors are operating in Swiss agriculture, but their total number is not large nor, according to the importers approached by the writer, are the prospects for their sale very encouraging.

ELECTRODES

The market for electrodes in Switzerland has increased during the war, the imports for 1913 of 3,232 tons having risen to 4,979 tons in 1920. France was the principal supplier in the last pre-war year and furnished 2,430 tons out of the total imported, while Germany sent forward 746 tons and the United States 56 tons. In 1920, however, the trade had become more centred in German hands, and some 93 per cent of the imports were derived from Germany. The United States, however, increased its exports to 65 tons.

EMERY WHEELS

Switzerland imported 331 tons of emery and carborundum wheels in 1913 and 702 tons in 1920. Germany in each year was the principal supplier (236 tons in 1913 and 397 tons in 1920), although France furnished 131 tons in 1920, the United States 89 tons, and Great Britain 38 tons. Whereas no exports are recorded from Canada in 1920, about one ton is credited during 1913.

PAINTS AND VARNISHES

As the varnish industry in Switzerland grew up during the war, Swiss varnishes are not generally considered to be as good as the imported product. Swiss paints, however, are of a much better quality and command a steady local market. Paints as well as varnishes, however, are also imported and were purchased abroad principally from France and Germany in both 1913 and 1920.

The prospects for the sale of Canadian varnishes is, however, more promising inasmuch as the United States is increasing these exports to Switzerland. In 1913 some 781 tons of varnishes were imported, to which Germany contributed 497 tons, France 99 tons, Great Britain 76 tons, Holland 66 tons, Belgium 21 tons, and the United States 18 tons.

Over against these pre-war imports there were only 391 tons purchased in 1920, but though the trade is much smaller, Germany has relatively lost ground to both Great Britain and the United States, the respective imports from these countries being 87 tons, 110 tons, and 45 tons. France's quota in this 1920 trade was, like that of Great Britain, some 110 tons.

PART IV

Swiss Trade

The relative importance of Swiss trade may be gathered from statistics recently published by the Economic Section of the League of Nations. The table which follows is based on these statistics and shows in dollars for the years 1913 and 1919 the average value, per head of the population, of imports and of exports separately and of imports and exports combined for a large number of countries important in international trade:—

Countries	Importation		Exportation		Total	
	1913	1919	1913	1919	1913	1919
Switzerland.. . . .	\$ 96	\$162	\$ 69	\$152	\$165	\$314
New Zealand	94	115	94	199	188	314
Holland.. . . .	254	178	200	89	454	267
Canada.. . . .	85	104	56	133	141	237
United Kingdom.. . . .	71	138	57	5	128	213
Denmark.. . . .	70	161	58	50	128	211
Australia.. . . .	79	72	76	115	155	187
Sweden.. . . .	40	104	38	66	78	170
France.. . . .	41	105	34	27	75	132
Belgium.. . . .	118	91	93	40	211	131
United States.. . . .	17	35	24	72	41	107

It is evident from the foregoing that for 1919 Switzerland and New Zealand tied for first place in these combined figures of imports and exports, and when account is taken of the fact that New Zealand exports mostly provisions and raw materials, the industrial importance of Switzerland is not only relatively enhanced, but there is at the same time inferred the indispensability of foreign trade to that country. Buying, manufacturing and selling again are the three keywords which describe Switzerland's position in international commerce.

The year 1920 saw Swiss trade reach its highest level in actual value—as prices were then at their peak—when the figures of 7,519,800,000 francs were reached for both imports and exports. Of course 1921 was everywhere an off year commercially with falling prices, and the record attained by Swiss trade in 1920 will be very considerably higher than the total value of Swiss exchanges for last year (when definite statistics are available).

The difference in the trade figures for the first nine months of 1921, for example, and the corresponding period of 1920 was almost $2\frac{1}{2}$ billion francs to the disadvantage of the first named year.

THE TRADE BALANCE

If 1920, however, saw Switzerland's largest total, it also witnessed the country's most unfavourable trade balance, which amounted to 965,800,000 francs. In fact most unfavourable trade balance, which amounted to 965,800,000 francs. In fact trade balance, and that exception was in 1916 when exports exceeded imports by some 69,210,000 francs owing to the unusually heavy exports of cattle and lumber. From 1913 onwards Switzerland's unfavourable trade balance improved over the pre-war figures till 1920—a fact due to the heavy sales made throughout the war years, and to the necessary curtailment of purchases abroad. Moreover, even if 1921 turns out to be a lean year for Swiss trade, it is anticipated that the unfavourable trade balance of 1921 will be appreciably smaller than the almost billion francs deficit of the preceding year.

COURSE OF SWISS TRADE

The table which follows illustrates the general course of Swiss trade from 1913, and is important inasmuch as it shows how Swiss commerce has increased in value since 1913, and how the unfavourable trade balance was being reduced up to the 1920 even if only for one year it was entirely eliminated.

Years	Total Imports	Total Exports	Total Trade	Excess of Imports
	(Millions of Francs)			
1913..	1,919	1,376	3,296	- 543
1914..	1,478	1,186	2,665	- 291
1915..	1,680	1,670	3,350	- 9
1916..	2,378	2,447	4,826	+ 69
1917..	2,405	2,322	4,728	- 82
1918..	2,401	1,963	4,364	- 438
1919..	3,533	3,298	6,831	- 235
1920..	4,242	3,277	7,519	- 965
1921 (Jan.-Sept.).. . . .	1,743	1,639	3,383	- 104

DECREASE IN QUANTITIES OF GOODS EXCHANGED

That an increase in the value of Swiss trade does not necessarily imply a corresponding increase in the actual quantity of goods exchanged, especially as regards imports, but that the greater value has been due to the higher market prices obtaining, is reflected in the statistics of the quantity of goods imported and exported in 1913 and 1919. The following table is illuminating in this connection:—

Imports—Weights (quintals, pieces, hectolitres)

	1913	1919	Decrease in 1919
Foodstuffs—			
Quintals..	15,026,092	9,597,054	5,429,038
Pieces..	220,268	10,124	210,144
Hectolitres..	1,868,627	1,452,302	416,325
Raw Materials—			
Quintals..	56,879,481	26,690,547	30,188,934
Pieces..	55,336	8,080	47,256
Manufactures—			
Quintals..	5,602,228	3,710,499	1,891,729
Pieces..	579,012	93,825	485,187
Total—			
Quintals..	77,507,801	39,998,100	37,509,701
Pieces..	854,616	112,029	742,587
Hectolitres..	1,868,627	1,452,302	416,325

Exports—Weights (quintals, pieces, hectolitres)

	1913	1919	Decrease in 1919	Increase in 1919
Foodstuffs—				
Quintals..	1,499,641	1,839,108	.....	339,467
Pieces..	5,739	85	5,654	.....
Hectolitres..	20,416	54,523	.....	34,107
Raw Materials—				
Quintals..	4,812,147	2,604,647	2,207,500	.....
Pieces..	17,011	14,839	2,172	.....
Manufactures—				
Quintals..	2,298,452	5,027,698	.....	2,729,246
Pieces..	16,855,345	17,761,900	.....	896,555
Total—				
Quintals..	8,560,240	9,471,453	.....	911,213
Pieces..	16,878,125	17,766,824	.....	888,966
Hectolitres..	20,416	54,523	.....	34,107

CLASSIFICATION PERCENTAGES

Swiss Government statistics divide imports and exports into three distinct categories, viz., raw material, manufactured goods, and food products. It will be interesting therefore to see the relative position of these general classifications in Swiss trade for the years 1913, 1917, 1919 and 1920.

	Imports			Exports		
	Percentage of Raw Material	Manufactured Goods	Food Products	Percentage of Raw Material	Manufactured Goods	Food Products
1913.....	35.7	33.1	31.2	11.1	74.3	14.6
1917.....	45.9	27.3	26.8	10.7	80.8	8.5
1919.....	36.4	29.9	33.7	5.9	87.3	6.8
1920.....	39.0	35.4	25.6	5.9	87.5	6.6

With regard to imports, it will be noticed that in the pre-war year imports were pretty evenly distributed over the three groups, with a slightly greater percentage for raw material. This percentage became much more pronounced by 1917 at the expense of the imports of food products, and though 1919 saw a nearer approach to the normal percentages, yet 1920 closed with raw material again on the increase and with food products down to their lowest point. Manufactured goods were, on the other hand, up to their highest point. The complete returns for 1921 are not yet available.

The Swiss exports tell quite a different story. Not only were the exports of manufactured goods more than five times the exports of food products in 1913 and almost seven times the exports of raw material, but this predominating tendency of the pre-war year became much more accentuated throughout the war, and by 1920 the exports of manufactured goods were over fourteen times those of food products and almost fifteen times those of raw material. These percentage figures are a striking evidence of the industrial character of Swiss exports and of the strengthening of the country's industrial position during the war.

INTERNATIONAL CHARACTER OF SWISS TRADE

In order to follow the international character of Swiss trade from 1913 to 1920 it has been thought advisable to insert a short tabular statement showing the direction of Switzerland's commerce with the principal foreign countries concerned:—

Countries of Origin	Imports (Millions of Francs)			
	1913	Rank	1920	Rank
Germany.....	631	1	809	2
Austria.....	108	6	72	12
France.....	348	2	603	3
Italy.....	207	3	325	5
Great Britain.....	113	5	466	4
Holland.....	25	12	91	11
Belgium.....	35	9	109	8
Russia.....	71	7	8	28
Sweden.....	2	22	21	22
Norway.....	2	21	5	33
Denmark.....	4	20	98	10
Spain.....	29	10	101	9
Roumania.....	15	16	4	36
Egypt.....	26	11	46	14
British India.....	12	17	27	17
Dutch East India.....	8	19	136	6
China.....	12	18	22	21
Japan.....	19	15	33	16
Canada.....	20	13	23	20
United States.....	118	4	865	1
Brazil.....	20	14	36	15
Argentine.....	37	8	121	7

If an examination is made of these foregoing statistics, it will be seen that Switzerland drew the largest amount of her imports in 1920 from the United States, which were almost eight times in value the imports of 1913 from that country, and when

American exports stood fourth in order of importance. Germany was the second supplier in 1920 over against the first in 1913. There follows then in the third place for 1920 France, while France came second in 1913; Great Britain occupied fourth place in 1920 and fifth place in 1913; Italy fifth place in 1920 and third place in 1913; and the Dutch East Indies sixth place in 1920 as against eighteenth place in 1913. It should be borne in mind that on account of the general rise in prices, these somewhat greater values represent a considerably smaller quantity of goods, and it may be further noted that the bulk of American exports to Switzerland consisted of wheat and coal.

SWISS IMPORT TRADE BEFORE AND DURING THE WAR

Before the war Switzerland bought far more goods from Germany than from any other country, and, in fact, more than from any other two countries combined. The imports from Germany averaged 620,000,000 francs during the three years 1911-13, as against 663,000,000 francs from the other three adjoining countries—Austria-Hungary, France, and Italy. From France and Italy combined they were 548,000,000 francs. From Belgium, Holland, and Great Britain she bought only to a value of 171,000,000 francs; from all the rest of Europe, 164,000,000 francs; from Africa, 34,000,000 francs; from Asia, 53,000,000; and from the Americas only 182,000,000.

During the war the sources of Swiss imports shifted to a marked extent, and this is reflected in the value of the imports from different countries. Average imports from Germany for the four years 1914-17 amounted to only 464,000,000 francs, as against 605,000,000 francs from the other three adjoining countries—Austria-Hungary, France, and Italy. Imports from France and Italy combined amount to 541,000,000 francs. In other words, whereas before the war imports from Germany were greater than from France and Italy combined, during the war they were less. Total imports from Belgium, the Netherlands, and Great Britain combined showed a slight increase for the four years' average 1914-17 over the pre-war average, this increase being wholly accounted for by the increase from Great Britain. The value of imports from the rest of Europe fell from an average of 164,000,000 francs during 1911-13 to an average of 89,000,000 francs during 1914-17. Total imports from Africa increased in value during the war, but remained relatively small in amount. The same is true of imports from Asia.

Imports from the Americas, however, increased greatly from 182,000,000 annually in the pre-war years to an average of 481,000,000 during the years 1914-17. The high-water mark was reached in 1916, when imports from the Americas reached 736,000,000 francs. Most of this great increase came from the United States, the imports from this country having risen from a pre-war average of 92,000,000 francs to 324,000,000 francs in 1915 and to 565,000,000 francs in 1916. In this year the United States had achieved a place of pre-eminence as a source of Swiss imports comparable to that held by Germany in the pre-war years. The imports from Argentine had also increased remarkably, from 34,000,000 francs before the war to 128,000,000 in 1916.

The shifting in the sources of Swiss imports caused by the war is most clearly shown by the following table:—

Countries of Origin	1911-1913 Average %	1914-1916 Average %	1917 %
Germany.. . . .	32.6	25.8	20.0
Austria-Hungary.. . . .	6.0	4.3	1.8
France.. . . .	18.7	12.0	12.7
Italy.. . . .	10.2	15.0	15.4
Great Britain.. . . .	5.8	6.2	11.2
United States.. . . .	4.9	16.8	19.1
Total Europe.. . . .	85.2	70.4	69.5
Total America.. . . .	9.6	22.6	24.8

These percentage figures show that during the war the percentage of Swiss imports coming from Germany, Austria-Hungary, and France decreased, while the percentage coming from Italy, Great Britain, and the United States increased. The total from Europe decreased and the total from the Americas increased sharply.

IMPORT TRADE SINCE THE WAR

In the after-the-war period the main significance of the Swiss imports lies in the fact that up to 1920 the United States still led in Swiss imports, that Great Britain has pegged up one place, that the imports from the Dutch East Indies has moved, owing chiefly to heavier sugar and coffee purchases, from eighteenth to sixth place, and that the Danish imports due to the buying of dairy products have considerably increased (from nineteenth to tenth place). Czecho-Slovakia appears for the first time and assumes at once the thirteenth place held by Brazil prior to the war. Of course this movement is at the expense of the old Austrian trade, which from sixth place moves down to twelfth. It remains to be seen whether the United States will be able to retain its pre-eminence in Swiss imports, and the returns for 1921 will in all probability show a reversion of the first place to Germany. Geographic conditions undoubtedly tend toward this reversion, and it would seem unlikely that the United States will be able to stand up permanently against English and Continental competition in coal, which forms such a large part of United States exports to Switzerland.

Although Canadian imports have gradually moved down from twelfth place in 1913 to eighteenth place in 1919 and to twentieth place in 1920, yet our actual exports in 1920 were three million francs greater than in the last pre-war year. Moreover, our exports to Switzerland ranked higher in 1920 than did those of China, Sweden, Greece, Central America, Hungary, Norway, Roumania, etc.

DESTINATION OF SWISS EXPORTS

It now remains for us to outline briefly the direction of Switzerland's export trade, and in the table which follows is shown the countries where Swiss goods have been consigned for the years 1913 and 1920:—

Countries of Consignment	Exports (Millions of Francs)			
	1913	Rank	1920	Rank
Germany.....	306	1	252	4
Austria.....	78	6	106	7
France.....	141	3	522	2
Italy.....	89	5	166	5
Belgium.....	28	11	87	10
Holland.....	12	15	88	9
Great Britain.....	236	2	646	1
Russia.....	59	7	1	50
Sweden.....	9	16	81	11
Norway.....	4	25	35	21
Denmark.....	7	20	44	16
Portugal.....	6	23	19	28
Spain.....	31	8	135	6
Roumania.....	8	19	26	25
Turkey (European).....	7	21	21	27
Egypt.....	6	24	37	17
British India.....	23	12	78	12
Dutch East Indies.....	9	17	35	20
China.....	7	22	31	23
Japan.....	9	18	48	15
Canada.....	30	9	91	8
United States.....	136	4	283	3
Brazil.....	20	13	51	14
Argentina.....	30	10	76	13
Australia.....	14	14	32	22
Greece.....	2	26	36	18
Czecho-Slovakia.....	...	...	36	19

SWISS EXPORTS BEFORE AND DURING THE WAR

Before the war Germany was Switzerland's best customer, the average annual exports to Germany during 1911-13 having been 296,000,000 francs—practically as great as the combined exports to the three other adjoining countries, France, Italy, and Austria-Hungary. Great Britain, to which Switzerland's exports averaged

226,000,000 francs during 1911-13, was the country's second-best customer. The United States and France practically tied for third place, with 138,000,000 for the former and 137,000,000 for the latter.

Viewing Swiss exports by groups of countries, we find the average pre-war exports—1911 to 1913—to the four adjacent countries—Germany, France, Italy, and Austria-Hungary—amounted to 605,000,000 francs; to Belgium, the Netherlands, and Great Britain, 264,000,000 francs; to the rest of Europe, 124,000,000 francs; to Africa, 17,000,000 francs; to Asia, 52,000,000 francs; and to America, 242,000,000 francs. It should be noted that exports to Germany were greater than to all of North and South America and Asia combined.

During the war there was a shifting in Swiss markets as well as a shifting in her sources of supply. Exports to Germany increased enormously in the course of the war. After dropping to 274,000,000 francs in 1914, they rose to 457,000,000 francs in 1915, to 709,000,000 francs in 1916, and fell slightly to 698,000,000 francs in 1917. The average for the four war years was 535,000,000 francs. This great increase in exports to Germany was in marked contrast to the great decrease in imports from that country.

Exports to France also increased enormously, rising to an average of 300,000,000 francs for the years 1914-17, as against 137,000,000 francs during the pre-war period. Exports to Great Britain and Italy increased also in amount, but to a less marked extent, while exports to the United States and to the Americas as a whole declined during the war.

The shifting in the destination of the exports from Switzerland is best shown in the following table, which gives the percentage of total exports sent to leading countries:—

Countries of Consignment	1911-1913	1914-1916	1917
	Average %	Average %	%
Germany.. . . .	22.2	26.5	30.0
Austria-Hungary.. . . .	6.3	7.7	4.0
France.. . . .	10.3	13.1	19.9
Italy.. . . .	6.6	6.2	5.9
Great Britain.. . . .	17.2	19.4	15.6
United States.. . . .	10.4	7.4	5.2
Total Europe.. . . .	74.7	82.9	87.8
Total America.. . . .	18.2	11.9	8.5

It may be noted that all countries shown in this table and the corresponding import table preceding, with the exception of Great Britain—whose relative importance as sources of supplies for Switzerland decreased during the war—showed an increased relative importance as a market for Swiss goods. To put it more concretely, Switzerland bought a larger proportion of her supplies from Italy and the United States (and Great Britain), but sold to Italy and the United States a smaller proportion of her goods. Switzerland bought from Germany, Austria, and France a smaller proportion of her supplies, but sold to these countries a greater proportion of her goods during the war than before the war.

The same statement holds true of Europe as a whole as compared with America as a whole. Switzerland bought from the rest of Europe a smaller proportion of her supplies and sold to it a larger proportion of her goods during the war than before, while the reverse was true as regards America.

SWISS EXPORTS SINCE THE WAR

It is interesting to notice that Germany has not continued to be Switzerland's best customer, and in fact, despite the very large increase of Swiss exports to Germany throughout the war, the exports in 1920 were actually lower in value than the average pre-war figures. Moreover, Germany slipped down from occupying first place to fourth place in 1920. Great Britain, which prior to 1913 occupied second place in Swiss exports, has taken on the rôle formerly played by Germany. France

held in 1920 second place as against third place in 1913; the United States was in the third place in 1920 as compared with the fourth place in 1913; Italy stood fifth in both 1920 and 1913; Spain from eighth place in 1913 moved up to sixth; the New Austria stood seventh in 1920 as against sixth for the old Austria in 1913; and Canada from being Switzerland's ninth best-customer in 1913 became her eighth best customer in 1920. The trend of Swiss exports since the war would seem to indicate that Switzerland is destined to export considerably more outside the Continent than before the war, and that in these increasing non-European continental exports, Great Britain, the United States, and Canada will principally participate.

THE CHARACTER OF SWISS TRADE WITH PRINCIPAL COUNTRIES

Without detailing in full, it seems essential to point out the leading commodities exchanged between Switzerland and the principal countries with which she trades.

Germany.—Switzerland has been to an appreciable extent dependent economically on German supplies for both her coal and iron. In 1913, for example, Switzerland bought from Germany 1,591,000 tons of coal, 371,000 tons of coke, and 883,000 tons of briquets, or a total of more than 2,800,000 tons of fuel. In the future therefore Switzerland is likely to obtain a large part of her coal from Germany, although of course she may draw more extensively on the former coal fields of western Germany which now belong to France. The imports of iron and steel and their manufactures into Switzerland from Germany, amounting to some 327,000 tons in 1913, will in all probability always be important. Germany is next door, has these commodities to sell, knows the Swiss market, and hence economic and geographic considerations would seem to point out the continuance of these German exports.

Among the other imports into Switzerland which will likely continue to be purchased from Germany to an appreciable extent are leather manufactures, paper, ready-made clothing, machinery, machine tools, and chemicals.

Germany takes from Switzerland principally cotton and silk manufactures, dynamo-electric machinery, machine tools, and clocks and watches.

France.—Among France's principal exports to Switzerland may be mentioned foodstuffs, cattle, leather, cheese, sugar, comestible oils, coal, iron, perfumery, silk textiles, cotton and woollen goods, rubber manufactures, iron and steel manufactures and machinery, chemicals, paper, leather manufactures and various lines of haberdashery.

None of the imports from France during the war, although the total value ran to a high figure, were of such vital importance to Switzerland as the coal and iron from Germany or the cotton and food from the United States.

Switzerland's leading exports to France may be enumerated as follows—cheese, chocolate, lumber, silk goods, woollen manufactures, iron manufactures, copper articles, and machinery and machine tools. Throughout the war the Swiss exports to France increased both in value and quantity.

Italy.—The leading imports into Switzerland from Italy are foodstuffs, e.g., sausages, eggs and poultry, wines, animals and silk; while Switzerland exports to Italy principally lumber, copperwares, machinery and machine tools, clocks, watches, and chemicals. These exports are on a much smaller scale than the very large imports of silk from Italy.

Great Britain.—The chief exports of Great Britain to Switzerland are cotton and woollen goods and yarns, iron and steel manufactures, copper manufactures, industrial chemicals. On the other hand, Switzerland exports to Great Britain such commodities as chocolate, condensed milk, embroideries, silk manufactures, clocks and watches, and chemicals, particularly aniline dyes. It will be noticed that these Swiss exports consist almost exclusively of finished goods, while the United Kingdom sends to Switzerland principally raw material or semi-finished products destined for further manufacturing processes in Switzerland.

United States.—American exports to Switzerland are made up principally of foodstuffs as wheat, oats, malt, lard, sugar, tobacco, raw cotton, coal, hides, leather and leather goods, metals of which copper is the most important part, and mineral oils. Just as Switzerland depended so largely on Germany throughout the war for her necessary supplies of coal and iron, so she depended to an appreciable extent on the United States for her wheat and cotton.

The most important exports from Switzerland to the United States are cheese, cotton manufactures (mainly embroideries), silk tissues as ribbons, clocks and watches, and aniline dyes.

SWISS CANADIAN TRADE

According to Canadian Government trade returns, the principal commodities exported from Canada to Switzerland are wheat, canned fish, live stock, sole leather, paper, agricultural machinery and instruments, tools, brass valves, asbestos, mica and chemicals. The total Canadian exports to Switzerland amounted to approximately 1½ million dollars for the fiscal year ending March 21, 1921. Over against these Canadian exports to Switzerland are our imports of Swiss products, which amounted to over 14 million dollars for the same year. Thus the trade balance is considerably in favour of Switzerland. We buy from Switzerland principally cotton piece goods, embroideries, lace, cotton and woollen knitted underwear, handkerchiefs, silk fabrics for neckties, silk piece goods, silk ribbons, curtains, braid for hats, watches and watch movements, chemicals, musical and scientific instruments, etc.

It is extremely difficult to estimate accurately the total trade between Canada and Switzerland, as in all probability a considerable quantity of goods exported from Canada to Switzerland are not accompanied by a through bill of lading but booked to some European port by our shippers, whence they find their way ultimately to Switzerland. On the other hand, some Swiss exports go first to the United States, or England and from there proceed to Canada. Or again, as the Swiss Consul General for Canada has recently pointed out, from August, 1914, to March, 1918, Canadian exports of grain to Switzerland amounted to almost 21 million dollars, whereas our declared exports show only some one million dollars.

It would seem likely, therefore, that the Swiss trade returns come a little nearer to showing the actual trade exchanges between Canada and Switzerland. From these Swiss trade statistics it may be seen that Swiss exports to Canada amounted to something over 18 million dollars in 1920 (our returns 14 million dollars), and Canadian exports to Switzerland some 4,700,000 dollars (our returns 1,400,000 million dollars). In fact, more than a passive interest has been latterly taken in the trend of Swiss exports to Canada, and inasmuch as our imports from Switzerland were taking on much larger proportions, especially for the year 1920, a certain amount of suspicion in some quarters was cast on the origin of these increasing imports, and it was even hinted, if not openly expressed, that Germany and not Switzerland was responsible for a large part of the imports credited to Switzerland. Had pains been taken, however, to study first the character of these imports such an impression must not have been formed. The goods which Switzerland have been sending to Canada are for the most part distinctly Swiss products, as, for example, the silk fabrics and ribbons which represent more than one-third of the whole Swiss export to our country. Nor would any one who had visited the chemical works at Basle, or taken the interest to inform himself thereabouts, state that Switzerland is not in a position to furnish to the world markets large quantities of both industrial and fine chemicals and aniline dyes and colours.

The point to be kept in mind is that Swiss exporters and industrialists have not been sleeping the last seven years like Rip Van Winkle, but have been pushing Swiss manufacturing and export trade, and the corollary to be drawn by ourselves is that possibly we could be a little more active in working up our own end of Swiss-Canadian trade. As up till now our exports to Switzerland have consisted almost entirely of natural products, and whereas we were the eighth best customer of Swiss

industry during 1920, the writer is of the conviction that without cutting down our purchases from this country we might strengthen the trade we have and pioneer in certain new directions. It seems quite undeniable that Switzerland has several commodities to sell us which we cannot buy better in any other world market, and hence we do ourselves the injury if we cancel this trade. Let us therefore "live and let live" in this Swiss-Canadian trade, and redouble our efforts to sell increasingly to Switzerland.

TABLE OF SWISS-CANADIAN TRADE

The following statistical table has been prepared by the Dominion Bureau of Statistics and will be of interest, showing as it does our principal exports to and imports from Switzerland for the fiscal year 1921:—

Imports from Switzerland in Fiscal Year 1920-21

Essential oil.. . . .	\$ 12,609	Undershirts and drawers of wool	\$ 5,789
Chocolate confectionery.. . . .	3,887	Other fabrics of wool.. . . .	12,811
Canned vegetables, except beans, corn and tomatoes.. . . .	3,619	Curtains and shams.. . . .	89,218
Boots and shoes.. . . .	5,864	Braids for making hats.. . . .	325,306
Gloves.. . . .	28,063	Hatters' bands, bindings, etc.. . . .	30,360
Cheese.. . . .	6,353	Hats of straw, grass or chip.. . . .	6,919
Gelatine and isinglass.. . . .	3,504	Hatters' plush.. . . .	6,608
Crochet and knitting cotton.. . . .	1,554	Collars of cotton, linen and cellu- loid.. . . .	22,813
Fabrics, printed.. . . .	32,115	Knitted gloves.. . . .	16,784
Fabrics, yarn or piece dyed.. . . .	156,032	Knitted goods.. . . .	37,805
Fabrics, grey, unbleached.. . . .	15,631	Wood and paper manufactures (total).. . . .	24,149
Plain shirtings, cambrics, etc.. . . .	1,684	Iron and its products (total).. . . .	19,129
Voiles, lawns, muslins, piques, etc	53,720	Aluminium hollow-ware.. . . .	5,309
Fabrics, white or bleached.. . . .	88,704	Nickel-plated ware.. . . .	2,271
Embroideries, white and cream- coloured.. . . .	1,027,419	Clocks.. . . .	8,905
Embroideries n.o.p.. . . .	36,224	Watches.. . . .	142,252
Lace, white or cream-coloured.. . . .	205,983	Watch actions.. . . .	1,398,156
Lace, n.o.p., and all manufac- tures of lace.. . . .	97,181	Watch cases.. . . .	131,040
Undershirts and drawers.. . . .	21,567	Chemicals and allied products (total).. . . .	190,030
Clothing n.o.p.. . . .	17,846	Toys.. . . .	3,497
Handkerchiefs.. . . .	254,389	Buttons of all kinds.. . . .	1,596
Manufacture of cotton n.o.p.. . . .	3,968	Tobacco pipes.. . . .	5,934
Handkerchiefs of linen.. . . .	14,951	Braids, cords, fringes, tassels.. . . .	75,107
Silk in the gum for underwear.. . . .	15,828	Brass band instruments.. . . .	3,382
Silk fabrics for neckties.. . . .	673,128	Phonographs, etc.. . . .	11,592
Silk fabrics n.o.p.. . . .	6,758,701	Other musical instruments.. . . .	19,081
Ribbons.. . . .	1,812,962	Optical instruments.. . . .	19,955
Worsteded and serges, including coatings.. . . .	30,736	Surgical instruments.. . . .	5,134
Knitted goods of wool.. . . .	8,295	Total all other commodities.. . . .	187,450
Shawls of wool.. . . .	8,006		

Grand total of imports..\$14,143,443

Exports to Switzerland for Fiscal Year 1920-21

Apples, green or ripe.. . . .	\$ 180	Sewing machines and parts.. . . .	\$ 675
Wheat.. . . .	1,279,980	Machinery and parts n.o.p.. . . .	5,900
Manufactures of rubber n.o.p.. . . .	540	Passenger automobiles.. . . .	1,114
Molasses and syrups n.o.p.. . . .	30	Lamps and lanterns.. . . .	73
Canned haddock.. . . .	40	Tools, hand or machine, n.o.p.. . . .	5,154
Canned sea herrings.. . . .	27	Brass valves.. . . .	6,202
Canned lobsters.. . . .	1,150	Electric apparatus.. . . .	1,310
Canned salmon.. . . .	480	Electrotypes and stereotypes.. . . .	2,000
Sole leather.. . . .	3,179	Abrasives, artificial, made up in wheels, stones, etc.. . . .	1,754
Boots and shoes.. . . .	380	Asbestos.. . . .	390
Manufactures of furs n.o.p.. . . .	485	Drugs, dyes and chemicals n.o.p.. . . .	20,020
Cotton manufactures n.o.p.. . . .	240	Jewellery n.o.p.. . . .	3,871
Silk and manufactures.. . . .	737	Stationery n.o.p.. . . .	37
Photographs.. . . .	5	Musical instruments and parts n.o.p.. . . .	27
Newspaper and other printed and lithographed matter.. . . .	30	Settlers' effects.. . . .	4,525
Paper and manufactures n.o.p.. . . .	2,447	All other articles exported.. . . .	20
Manufactures of wood n.o.p.. . . .	325	Total all other commodities.. . . .	8,390
Ploughs, and parts.. . . .	1,592		
Garden and farm tools.. . . .	7,733		
Adding machines.. . . .	58,215		

Grand total of exports.. \$1,410,777

PRINCIPAL SWISS IMPORTS AND EXPORTS FOR 1920

In the tables which follow there is given the value of the principal imports and exports into and from Switzerland for the year 1920:—

(1) *Raw Material*

	Imports (Millions of Frs.)	Exports (Millions of Frs.)
Silk.. . . .	263	95
Cotton	135	13
Wool.. . . .	62	10
Flax, jute, hemp, rubber, straw and hair.. . . .	16	1
Coal.. . . .	545	...
Iron.. . . .	198	10*
Other non-precious metals.. . . .	73	13
Precious metals.. . . .	50	4
Agricultural products, as oil, oilseeds, hay, fertilizers, horses.. . . .	132	21†
Tobacco.. . . .	70	...
Lumber.. . . .	30	18
Other raw material including hides and skins.. . . .	30	34
Chemical products, as petroleum, etc.. . . .	53	‡

(2) *Manufactured Products*

Silk.. . . .	68	668
Cotton.. . . .	236	716
Wool.. . . .	152	76
Flax, rubber, hemp, straw, etc.. . . .	88	60
Iron and steel.. . . .	291	359
Manufactures of other non-precious metals.. . . .	84	102
Manufactures of precious metals.. . . .	22	30
Watches and clocks.. . . .	7	326
Chemicals.. . . .	235	308
Leather manufactures.. . . .	57	70
Paper and manufactures thereof.. . . .	38	37
Wooden manufactures.. . . .	47	63
Pottery and glassware.. . . .	58	8
Other manufactured goods (of which 21 for tobacco manufacturers).. . . .	68	47‡

(3) *Food Products*

Wheat.. . . .	260	...
Other cereals.. . . .	56	...
Wine.. . . .	142	19
Fruits and other products of the soil.. . . .	99	14
Cattle for slaughtering.. . . .	18	...
Meat.. . . .	42	...
Eggs.. . . .	24	...
Butter.. . . .	55	...
Other edible fats.. . . .	30	...
Other food products derived from animals.. . . .	44	...
Sugar.. . . .	191	...
Coffee.. . . .	28	...
Cocoa.. . . .	41	...
Table oil.. . . .	21	...
Other food products.. . . .	34	...
Condensed milk.. . . .	...	48
Cheese.. . . .	...	8
Meat.. . . .	...	2
Chocolate.. . . .	...	96
Sweets.. . . .	...	6
Preserved fruits.. . . .	...	2
Other food products.. . . .	...	19

*Ferro-silicon and ferro alloys. †As cattle for breeding purposes. ‡Of which 21 for tobacco manufacturers.

PART V

Miscellaneous Data

COMMERCIAL ORGANIZATIONS IN SWITZERLAND

Among the commercial organizations of Switzerland, the Chambers of Commerce naturally come first. These are made up of two kinds, viz., those entirely independent and those organized under State auspices. The latter consist of the Cantonal Chamber of Commerce, Industry and Trade at Chaux-de-Fonds, whose president receives a salary from the State and whose members are selected by the Cantonal Council; the Cantonal Chamber of Commerce and Trade at Berne, whose entire costs are defrayed by the State; and an official Chamber of Commerce maintained by the Swiss Confederation and Cantons of the several cantons, e.g. Neuenburg, Berne, Geneva, and Solothurn, which are the centres of the watchmaking industry. In addition to the foregoing, the several cantons are the seats of official commissions for trade and commerce which are really departments of the Government administration.

The independent Chambers of Commerce in Switzerland are much the same in their methods and activities as similar organizations in Canada, and exist in all the principal cities of the country. The central Chamber of Commerce at Zurich known as the "Swiss Chamber of Commerce" receives a small annual subsidy from the Federal Government. It is the executive organization of the Swiss Commercial and Industrial Association, which in turn is a federation of all Swiss commercial organizations, and which includes a representation of official bodies interested in Swiss trade and commerce. Although each of the Chambers of Commerce are federated in the common organization, yet each is quite jealous of its own autonomy and maintains the central bureau for the protection of the general interests of Swiss commerce. There are sixty-two separate organizations fused in the Swiss Commercial and Industrial Association, including chambers of commerce, manufacturers', merchants', and general commercial associations.

BRITISH CHAMBER OF COMMERCE IN SWITZERLAND

In connection with this subject, a word may be added about the British Chamber of Commerce for Switzerland. This organization was started about two years ago with headquarters at Basle and a branch office at Lausanne. Its aim is of course the fostering of trade relations between Switzerland and the British Empire, and the writer saw many evidences of the splendid work it was doing while on his official mission. The secretary is a most able and energetic official, the directors are all recognized leaders in Anglo-Swiss trade, and Canadian firms will find the chamber a most useful organization in the development of Canadian trade with Switzerland and might even advantageously connect themselves with this institution. A monthly publication entitled the *Anglo-Swiss Review* is the official organ of the chamber.

COMMERCIAL BUREAU OF INFORMATION

Two other Swiss commercial Bureaus of Information deserve a passing notice inasmuch as they may prove of considerable value to Canadian traders. (1) The Swiss Industrial Bureau, Grotte 1, Lausanne, which is in a position to supply foreign inquirers with full data regarding Switzerland's economic life and which is prepared to introduce especially foreign importers to Swiss manufacturers or exporters of products, which are partly or totally missing in Switzerland, to interested Swiss firms. (2) The Swiss Information Office for the Purchasing and Marketing of Goods, Zurich, is under the supervision of the Commercial Branch of the Federal Depart-

ment of National Economy and under that of a committee in which the Swiss Federal Council, the Swiss Commercial and Industrial Association, and the Swiss Farmers' Association are officially represented. The purpose of the institution is pretty much along the lines of the Swiss Industrial Bureau at Lausanne, and the writer found both of these organizations most useful and courteous.

THE BASLE SAMPLE FAIR

Though the present Basle Sample Fair is comparatively a recent institution, fairs of a similar kind have been held in Basle for many years. The admirable situation of the city offers advantages that were realized as far back as the fifteenth century. With the advance of civilization and the development of modern transport, Basle has maintained its position as one of the most important European junctions. The development of the Rhine as a great European transport artery for merchandise of all kinds will add not a little to the importance of this city.

The modest dimensions of the 1917 Fair at Basle have been amplified in the succeeding years, and the 1921 Sample Fair covered premises extending over nearly 20,000 square metres. During the course of the last year's fair—which was somewhat lower in numbers than the figures for 1920 owing to the exceptional economic conditions prevailing—50,000 buyers were registered. The development of the Fair since 1917 may be seen by the following figures:—

	Exhibitors	Space (Square Metres)	Registered Buyers
1917	831	6,000	.....
1918	990	9,000	18,000
1919	1,377	17,000	45,000
1920	1,209	19,000	50,000
1921	1,100	20,000	30,000

The fair held in the spring is of a purely national character, only Swiss products being exhibited. Its large membership drawn from all parts of the country, and including exhibitors of practically every branch of Swiss industry, ensures that it is entirely representative of the best of Switzerland's production. The temporary industrial stagnation from which Switzerland is at present suffering, and which is primarily due to a decrease in exports, should give an added impetus to the Basle Fair, which is already attracting a considerable number of foreigners from all parts of the world, including Canada. Special facilities have been arranged for the accommodation of British and other foreign visitors in the town for the duration of the fair. The plentiful and up-to-date hotel accommodation of Basle does away to a great extent with the difficulties experienced in most cities where similar exhibitions and fairs are held.

THE AGRICULTURAL FAIR AT LAUSANNE

Another exhibition of considerable national importance is that of the Comptoir Suisse des Industries Alimentaires et Agricoles, held at Lausanne in the autumn of each year for fifteen days. The fair itself covers some 39,000 square metres of area, of which 13,000 square metres are under cover. This fair, like that of Basle, is subsidized by the Federal Government, and endeavours by means of exhibits to develop Swiss agriculture and the industries connected with food production as chocolate, condensed milk, cheese, preserved fruits, wines, etc.

THE PROPOSED BRITISH EXHIBITION AT LUCERNE

The town council of the city of Lucerne proposes to hold a British Dominion Exhibition, if it can be arranged, during the present year. When in Switzerland the writer visited this city and the Städtpräsident outlines the scope and plans of the exhibition in the following terms:—

Switzerland, lying in the heart of Europe has been at all times dependent for her supplies upon overseas countries, and this dependence has been very remarkably accen-

tuated in consequence of the war. She imports great quantities of all kinds of cereals, fruit, preserves, eggs, butter, tinned meats and fish, lard, oils, sugar, cotton, wool, silk, flax, hides and furs, bristles, special leather, seeds, tallow, glass, diamonds, fine woods, manure, horses, cattle, fodder and tanning stuffs, coal and metals of all kinds.

The aim of the British Dominions Exhibition is to bring into greater prominence before the European public the varied nature and extent of the products of these overseas countries.

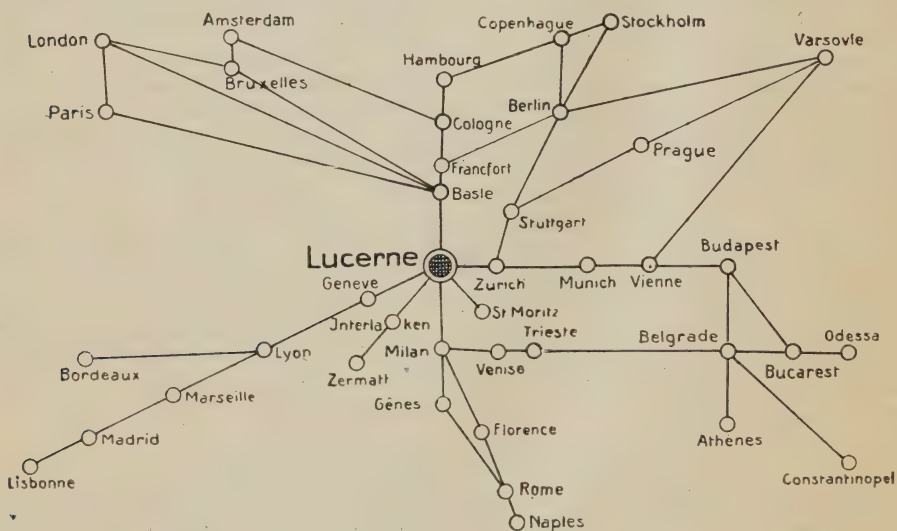
For this purpose the town of Lucerne which is organizing the exhibition, places free of cost at the disposal of the exhibitors the entire superficial area of the International Peace Museum building. The museum building adjoins the station. Besides this the free use of such water, gas and electrical plants as are in existence in the building will furthermore be provided, any additional installations being at the expense of the exhibitors. The consumption of the above will be charged to the exhibitors at the same rates as to the inhabitants of Lucerne. Post and telegraph offices are in the immediate neighbourhood of the building.

No actual sales may be transacted at the exhibition, but orders may be taken by the exhibitors. A general catalogue will be drawn up for the use of the public and the exhibitors. Cinematograph representations of industrial and agricultural life in the Dominions will be warmly welcomed by the exhibition authorities, who will endeavour to make these representations a conspicuous feature.

A Swiss committee will be formed, composed of representatives of federal and local authorities, as well as of representatives of Swiss commercial and industrial undertakings. This committee will nominate an executive board in Lucerne. The Dominions interested in the exhibition will form an analogous committee. The Lucerne and Dominion committees will regulate all special questions.

The due advertisement of the exhibition in Switzerland will be undertaken by the Swiss committee, while the Dominions committee will arrange for its advertisement in their respective countries and elsewhere. The diplomatic and consular services on both sides will be asked to assist in this publicity work.

A map showing the central position of Lucerne is appended.



It would seem that Switzerland's central position and her excellent railway system radiating into every part of Europe as well as the world-wide reputation of Lucerne to which thousands of visitors come every year, would go a long way in making any such exhibition a success. The offer itself of free show space, etc., in

such a splendid building is most generous in character, and the writer believes that Canadian manufacturers and exporters would be well advised in supporting this exhibition.

COMMERCIAL REGULATIONS

Trade Marks.—As Switzerland and Canada are parties to the International Convention for the Protection of Industrial Property, Swiss laws on the subject of trade marks have to be considered in connection with the provisions of the convention to which each signatory country is subject. This International Convention provides that each of the countries party to the convention shall register and protect the trade-marks of citizens and residents of each of the countries which are parties to the same, to the extent that domestic trade-marks are protected. It further provides that each country which is a party to the convention shall register the trade-mark of citizens or residents of the other countries in the form in which they are registered in the country of their origin. It also provides that application for registration made in any of the countries within four months from the date of application for registration in the country of origin shall be given the same effect as if made simultaneously with the application in the country of origin.

What is required is a duplicate statement in French bearing the mark and indicating (1) the name and address of the proprietor, (2) the class of goods on which the trade mark is to be used, (3) the date of registration in country of origin. A cliché of the mark to be registered is also required. The term for which registration is granted is twenty years, but renewal is of course possible. A nominal fee is charged by the International Bureau at Berne.

Fortunately, Switzerland is not one of those countries where trade marks can be pirated and in order to use it the creator of a mark be levied on for black mail because some one else has succeeded in registering it first. The first user and real owner of a trade mark, although a foreigner, will not be deprived of his property rights even if the trade mark has been registered by some one else in Switzerland. Conversely it has been held by the Swiss Federal courts that marks which are open to any one to use in a neighbouring foreign country cannot become exclusive property in Switzerland; but descriptive words in a foreign language (e.g., English), although designating the product to which they are applied, which could not give rise if in French or German to an exclusive property right, may be properly filed as a trade mark in Switzerland.

Commercial Travellers.—Commercial travellers representing British firms and calling upon Swiss commercial firms which buy goods for reselling or which require them for industrial purposes, are entitled to licenses free of charge. This license, called *carte de legitimisation*, is, however, compulsory and is only given to British travellers on production of a certificate from a British Chamber of Commerce or some other similar competent authority stating that the applicant is a *bona fide* commercial traveller in his own country. The license is obtainable at the offices of state in each canton and is valid once obtained for the whole of Switzerland.

There are no other taxes. Sometimes permission can be obtained to carry merchandise for sale as distinct from samples. Application for such permission should be made to the Government of the canton which the traveller proposes to visit. He must, however, first obtain Federal assent from the Department of Commerce at Berne.

As a general rule it may be said that samples of commercial value are admitted on deposit of security as in many other countries, and that this deposit is refunded in case the samples are taken out of the country within one year.

Consular Invoices and Certificates of Origin.—No consular invoices nor certificates of origin are required to accompany any exports to Switzerland.

Credit Customs.—As a general rule credits prevail at 30 to 90 days with a two per cent discount for cash payments. Thirty-day drafts, acceptance against railway or ship documents, are the terms most generally given.

THE SWISS TARIFF

In order to bring the old custom duties, which were fixed in 1902, into line with the present economic situation, the Federal Council was authorized, by legislative action of the 28th of February, 1920, to bring into effect a provisional tariff, which may be maintained after or modified up to June 30, 1923, by the Federal Assembly. This new provisional tariff accordingly came into effect on the 1st of July, 1921.

Now it may be noted that the pre-existing Swiss rates were comparatively low for a country like Switzerland which, although distinctly free trade up to the end of the seventies, since then has shown a tendency towards increasing protection. On the basis of pre-war prices, according to an official calculation, Swiss customs duties represented in general about 6 per cent of the value of the imports, but in 1921 only about 3 per cent. These duties therefore no longer provided the protection aimed at when they were established, nor did they yield a revenue commensurate with the alteration in the value of currency.

In order then primarily to safeguard the existence of Switzerland's economic life, it seemed indispensable to grant to many branches of industry a more efficacious protection than in practice the old tariff accorded. The result has been therefore that the majority of the items in the tariff have been, generally speaking, raised considerably higher, and that most of the items which formerly were duty free are now made subject to duty. To be more explicit, 145 items of the tariff, principally the raw material group, have been increased $\frac{1}{2}$ per cent; some 80 items, including other raw material and bread-making cereals, have been increased from $\frac{1}{2}$ to 1 per cent; 215 items, referring to food products, raw material and semi-manufactured goods, have been increased from 1 to 3 per cent; 163 items from 3 to 5 per cent; 329 items from 5 to 10 per cent; and 315 items over 10 per cent. In other words, about 70 per cent of the tariff items now bear customs duties less than 10 per cent.

These Swiss duties are at present calculated on gross weight, but a decree has recently been made by the Customs authorities providing a minimum tare. As this means practically an increase in the tariff, the Federal Government propose, according to press despatches, to revise the tariff rates.

Unanimous opinion is always difficult to obtain on any tariff policy, and the tariff under discussion has been no exception. Swiss agriculturists, industrialists, and consumers differ in their appreciation and condemnation of the new tariff, and no one party seems to be quite satisfied with its provisional form nor with its first six months' operation. The ordinary consumer, who thinks enough to express an opinion, claims that the cost of living will continue to increase so long as such a tariff is maintained, especially in view of the higher duties on food products, while manufacturers are clamouring for even greater protection and the agrarian party or the Peasants' League for freer trade in some manufactured goods, but a still higher duty on agricultural products. As has been said, the tariff as it now stands is one of compromise and hence dissatisfaction all round, although it may be the best workable solution to a perplexing problem. In not a few instances the rates of duty are exceptionally high, but it is to be remembered that Switzerland is surrounded by Germany, France, Belgium and Italy, each in its way an industrial country anxious to exploit its neighbour and the *raison d'être* of this new provisional tariff in manufactured goods is therefore quite understandable.

The increased duties on foodstuffs can best be explained by recognizing the power of the Peasants' League in Government circles.

Canadian exporters doing business with Switzerland may obtain detailed information about the Swiss customs duties by writing to the office of the Canadian Trade Commissioner in Milan, or on application to the Director, Commercial Intelligence Service, Ottawa.

It may be further noted that, apparently to prevent the swamping of the Swiss market with goods exported by countries with a depreciated currency, a long list of

commodities may only be imported into Switzerland by special Government authorization, but these permits can naturally best be obtained on this side by the Swiss importer. A copy of these restrictions is on file at the Department of Trade and Commerce, Ottawa.

THE LABOUR SITUATION

Unemployment.—The acuteness of the industrial depression in Switzerland is evidenced in the total figures of unemployment which, at the first of 1922, approximated 140,000, and which still go on increasing. For instance, in the cigar industry 28 per cent of the workers were on short time, and 14 per cent actually out of work. In the tanning industry one-fifth were on short time, and in bootmaking only 50 per cent were working. The prospects in the cabinet-making trade were very dull. In the silk clothing industry 35.5 per cent were working short time, and 10 per cent completely unemployed. In the silk ribbon industry all hands were employed, but in the cotton industry unemployment has slightly increased to 19.2 per cent. The situation in the embroidery industry is so bad that it is practically impossible for the Federal statistician to find shops that were working. In the woollen industry, 22 per cent were on short time as against 28 per cent last month (January, 1922), and export shows a slight recovery. In the knitting trade 40 per cent were working short time and 5 per cent totally unemployed. The straw hat industry, which has important exports, was fully employed, and hoped so to continue at least up to the end of the season, namely, the end of March. There are still 40 per cent on short time in the paper industry.

Until export trade takes on again new signs of life, there can hardly be expected any appreciable improvement in the unemployment situation, inasmuch as the nature of the home market is much too small to absorb the output of Swiss production.

Hours of Labour.—At the beginning of 1920 the legal 48-hour week was introduced generally into Swiss industry, and last June was extended to the various transport undertakings. This new working period constitutes a considerable reduction in the weekly period of work before the war, when Swiss operators according to their trade were usually occupied from 54 to 59 hours. As shorter hours have not been compensated for by greater output, the tendency among employers has been to apply piece rather than time rates; while a movement is now under way, on the recommendation of the Swiss factory inspectorate, to increase the weekly labour hours in the embroidery trade from 48 to 52 hours. The resolution of these experts is likely to be extended to other textile trades. Referring to this subject the correspondent of the *Economist* in a recent issue writes as follows:—

“Not only the labour unions, but also some of the manufacturers, are against this method of governmental cheapening of production. As a matter of fact, the trade unions agree to a systematic reduction of wages in proportion to the fall in the prices of commodities, but unfortunately the import prohibitions for slaughtering cattle, meat, corn, flour, sugar, butter, and cheese practically prevent a drastic reduction in the cost of living. In view of the political power of the Peasants' League, the Government cannot reduce the cost of living for the workman, so that the cheapening of production cannot be made in any other way than by increasing the hours of labour. Many manufacturers are of the opinion that this will not be as efficient a way as reducing wages by reducing the cost of living. The Government itself, as a condition of financial assistance to the watch industry, imposes reduction of wages and no increase of the hours of daily labour. Unfortunately, so long as the prohibitionist tendency of the Peasants' League guides the decisions of the Swiss Government, any efficient reduction of costs of production is impossible. At any rate increasing weekly hours of labour will not decrease unemployment.”

Wage Increases.—According to official statistics, the average hourly wages of fourteen classes of skilled operators increased between July, 1914, and June, 1920, when the peak was reached, by 144.9 per cent, and those of eleven classes of semi-skilled men by 164.3 per cent.

Trade Unions.—The trade union movement has taken on much large proportions in Switzerland since the war, and particularly since 1916. At the end of 1916, for example, there was a membership of some 88,648 in the chief labour central organization, while at the end of 1920 the membership was 223,588. The following are the strongest trade unions:—

Union	Membership		
Metal and watchmakers.. . . .	85,000	including	14,000 women
Railway workers.. . . .	39,049		
Textile factory workers.. . . .	24,000	"	14,300 "
Commercial transport and food workers	19,000	"	6,900 "
Woodworkers.. . . .	11,800	"	64 "
Typographers.. . . .	5,150		

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